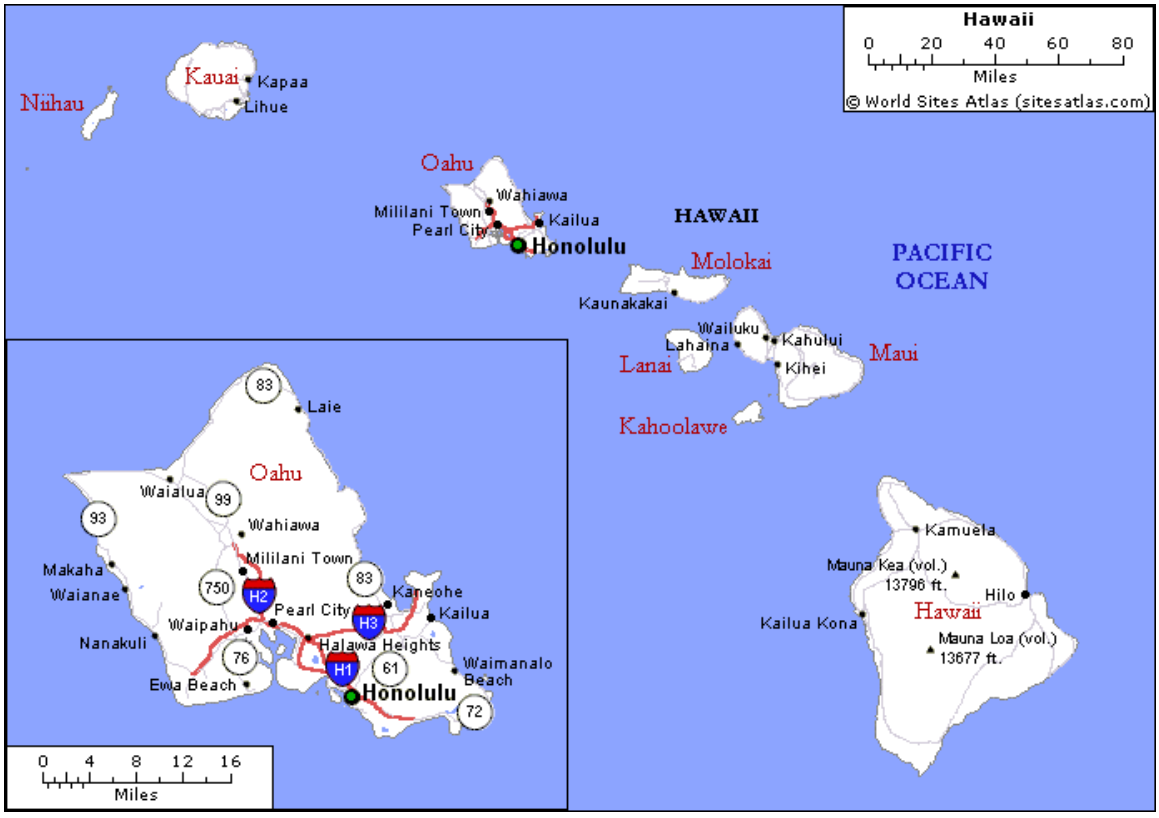
UNIVERSITY OF CALIFORNIA SAN FRANCISCO

CHILD SERVICES RESEARCH GROUP (CSRG)

EVALUATION OF TWO THERAPEUTIC PROGRAMS FOR CHILDREN WITH SERIOUS MENTAL HEALTH PROBLEMS AND THEIR FAMILIES:

HOME-BASED MULTISYSTEMIC THERAPY (MST) AND THE MST CONTINUUM OF CARE



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INTRODUCTION

BACKGROUND AND CONTEXT

Fundamental quandaries exist when building service systems for youth with emotional and behavioral disorders. At this point, the cumulative knowledge base does not provide magical solutions for how to provide efficient, equitable, and effective services for youth with mental health needs. System level reforms, largely based upon principles delineated in the Child and Adolescent Service System Program (CASSP), that integrate and coordinate services provided to children and families result in important system level improvements, such as reductions in the utilization of restrictive levels of care, increased access to services, and improved satisfaction with services (Rosenblatt, 1998, U.S. Department of Health and Human Services, 1999). There is, however, no current evidence regarding the capacity of such system level reforms to create improvements in the mental health status of children with emotional and behavioral disorders beyond those that would be expected due to the passage of time or to standard clinical practice. Clinical interventions and models do exist that demonstrate the capacity to produce superior clinical and functional outcomes for children with specific mental health conditions. The vast majority of these interventions, however, have only been studied and implemented in controlled conditions that are not typical of most contemporary public or private mental health service systems. It is not clear whether such interventions tested in controlled settings will or do work in less controlled clinical settings.

Multi-Systemic Therapy (MST) is one of a handful of interventions that have demonstrated the capacity to provide superior outcomes compared to standard practice in "real world" settings (Henggeler & Borduin, 1990; Henggeler, Schoenwald, et al., 1998, U.S. Department of Health and Human Services, 1999). MST is a family- and community-based treatment developed to address the minimal effectiveness and high cost of existing services for serious juvenile offenders (e.g., Henggeler et al., 1986; Brunk, Henggeler & Whelan, 1987; Borduin et al., 1995; Henggeler et al., 1991; Henggeler, Melton, & Smith, 1992, Henggeler, Rowland, et al., 1997; Henggeler, Rowland, et al, 1998; Schoenwald, Ward, Henggeler, & Rowland, 1998). The empirical evidence for the effectiveness of MST for serious juvenile offenders is as impressive as any intervention that is currently being delivered in public or private service delivery systems. There is also evidence of the effectiveness of MST with inner-city delinquents, substance abusing or dependent juvenile offenders, and youths with psychiatric emergencies. MST itself, however, does have limitations. The strongest evidence for MST exists with youth who have contact with the juvenile justice system because of willful misconduct and are primarily diagnosed with serious disruptive behavior disorders or anti-social personality disorders. The demonstrated benefits of MST may not remain intact as MST is more widely disseminated. MST is not a panacea for all youth who require mental health services. There is no evidence, for example, that MST is effective for youth diagnosed primarily with depression or pervasive developmental disorders.

MULTISYSTEMIC THERAPY (MST) IN HAWAII

This report investigates the process and outcomes associated with the use of MST with children and families in the State of Hawaii. Hawaii is one of 26 states currently operating licensed MST programs. It is unknown how many states and programs are providing services that are not licensed but are based on MST principles. Nonetheless, the number is almost certainly quite large in view of the prominence given to MST in many recent

reports, including the U.S. Surgeon General's Report on Mental Health (1999). Two forms of MST were introduced to Hawaii: MST Home-Based services and the Continuum of Care. Home-Based MST, provided to families since the late 1970s, is characterized by low therapist caseload, provision of services in home, school, and community locations to overcome barriers to service access, time-limited duration of treatment (typically 3-5 months), and 24 hour/7 day availability of therapists to respond to crisis. The MST Continuum of Care was designed to address two limitations that have been observed in the ability of MST Home-Based programs to achieve favorable clinical outcomes: Many families still require treatment after 3-5 months, and programs do not have the capacity to retain continuity of care when youths receive out-of-home (and community) placements. Thus, the MST Continuum of Care provided a greater range of intensive services with no time limitations and had the same MST staff controlling clinical decisions in all placement settings.

The Continuum of Care was selected by the DOH/CAMHD for use with Felix class youth who were receiving the most intensive and costly out-of-home placements. The target group for the Continuum of Care included children and adolescents with more severe psychiatric conditions. The "backbone" of the Continuum of Care was MST Home-Based services. Other components within the range of services offered through the Continuum included: crisis team, short-term residential or inpatient beds for crisis stabilization, therapeutic foster care, respite services, and intensive outpatient services. The Continuum of Care was viewed as a potential alternative to more costly, long-term psychiatric inpatient treatment.

It is essential to understand that there are significant differences in the existing knowledge base between MST Home-Based Services and the MST based Continuum of Care. MST Home-Based services, provided primarily to youth with conduct or antisocial personality disorders involved in the juvenile justice system, have an extensive empirical knowledge base regarding effectiveness across multiple settings. Although the originator of the model has conducted most of the existing work on MST Home-Based Services, the quality of the research is widely considered to be of the highest level and has been published in the top mental health journals. Nonetheless, it is still beneficial for other independent investigators to conduct research on MST. Toward this end, there are currently over half a dozen independent trials of MST Home-Based Services underway. These, and other studies, will ultimately determine the full range of contexts and populations for which MST is, or is not, effective.

The evidence for the MST-Based Continuum of Care is considerably more limited than for MST Home-Based Services. The Continuum of Care was largely created to extend the principles of MST to youth who have severe mental health problems beyond conduct disorder who might otherwise require residential care or psychiatric hospitalization. The originators of the Continuum of Care model have conducted one study and concluded that the findings were positive. A second study is underway in Philadelphia. The third study was being conducted in Hawaii but was terminated before completion. The MST based Continuum of Care is considerably more "experimental" at this stage than MST Home-Based Services, though there is more evidence for the MST-Based Continuum of Care than there is for many interventions currently delivered in public mental health systems.

The point of the discussion so far is not to defend MST against all potential criticisms. Clearly, the use of MST in Hawaii has been controversial and resulted in reports that strongly questioned the appropriateness of using MST in the state. The use of MST has, in turn, been defended. The arguments on both sides are extensive. Rather, it is important to

understand as a context for this report that the vast majority of the interventions that are commonly delivered in public mental health systems have little or no empirical data supporting their effectiveness in real world settings. Outpatient treatment, for example, is the most common form of treatment for children and adolescents, utilized by 5 to 10 percent of the children and families in the United States (Burns et al. 1998). It is the most extensively researched intervention and has the strongest research base and demonstrated efficacy deriving from over 300 studies. Yet, a review of outpatient psychotherapy was only able to identify nine studies conducted in non-research clinical settings (Weisz, Donenberg, Han, & Weiss, 1995) and those studies found little or no positive effect.

It is possible to criticize virtually any intervention that would be delivered in real world public mental health settings on the grounds of "lack of sufficient research". Still, as emphasized in the U.S. Surgeon General's Report on Mental Health (1999), there is considerable need for choices to be made regarding which services to provide. The existing empirical knowledge base can provide guidance on making these choices, but cannot provide unimpeachable solutions. We agree with the following conclusion from the U.S. Surgeon General's Report on Mental Health (1999) that summarizes the existing state of the knowledge base:

> "Research is **under way** to demonstrate the effectiveness of **most treatments** for children in actual practice settings (as opposed to evidence of "efficacy" in controlled research settings)(emphases added)".

PURPOSE OF THE EVALUATION

Given the current status of the knowledge base regarding interventions for children and adolescents and the existing reports on the use of MST in Hawaii, we feel there is little more to be gained by our entering any further into the debate underway in Hawaii regarding whether the existing research on the effectiveness of MST is sufficient to merit its inclusion in a service delivery system. In this report, it is not possible to provide definitive conclusions regarding whether MST is ultimately an effective service delivery model in Hawaii. Rather, the primary purpose of this evaluation is to learn as much as possible regarding the implementation of MST in Hawaii up to this point, to help guide further decision-making.

This focus on learning from the process of MST implementation in Hawaii, rather than providing definitive statements regarding the effectiveness of MST in the state, is necessitated in part by the circumstances under which the evaluation was conducted. The Child Services Research Group (CSRG) at the University of California San Francisco (UCSF) was approached to conduct this evaluation in August 2001. However, the contract for evaluation services was not finalized until the third week in November 2001. The CSRG evaluation team began data collection in late November. The due date for the evaluation report was December 14, 2001. Due to the constrained timeline, several accommodations were made to the study plan:

1. Primary data collection activities involved interviews with administrators, agency administrators, agency supervisors, and MST therapists. CSRG relied on six secondary data sources:
   - Service utilization and cost data provided by the Department of Health (DOH)/Child and Adolescent Mental Health Management Information Services (CAMHMIS);
   - Process information on program referrals, staffing, and capacity from the MST Home-Based services database;
   - Outcome information on children and families from the MST Home-Based program outcome database;

- Baseline and outcome data for families randomly assigned to Continuum of Care and regular services through a study conducted by the Medical University of South Carolina (MUSC);
- Cost data and service contract expenditure information provided by the Department of Health (DOH)/Child and Adolescent Mental Health Division (CAMHD);
- Documents provided by service providers and DOH/CAMHD personnel (e.g., memoranda, training materials, practice guidelines, referral guidelines, etc.).

2. Time and monetary constraints prohibited CSRG from interviewing families that received services through either therapeutic program. However, leaders from a parent advocate group, Hawaii Families As Allies, were interviewed to gain a family perspective.

3. Time and monetary constraints precluded the collection of original outcome data. That is, data sets were extracted from extant databases and DOH/CAMHD records for analysis. Given the level of research conducted on MST to date, it would have been necessary to create a well-designed study involving planned comparison groups for the Hawaii sites to contribute meaningfully to the knowledge base regarding the outcomes of MST. Hawaii is already part of a National Institute of Mental Health (NIMH) funded, extensive, multi-year study underway to investigate the organizational and service system factors that influence successful development and implementation of MST programs.

These practical considerations regarding the availability of data and of time, combined with the goal of providing information and analysis that is relevant to better understanding the use of MST in Hawaii, lead to eight research questions. Multiple methods were utilized to address these questions, including both quantitative and qualitative data. On-site interviews were conducted to garner perspectives regarding the selection of MST for use in Hawaii, delivery of MST services, and barriers and facilitators in implementing MST. Existing data from management information systems and other records were used to address questions of fiscal impact and youth functional status.

The following questions guided the CSRG Evaluation Team:

1. How was MST selected for use with children in Hawaii's public mental health system?
2. How is MST different from regular mental health services for children with severe mental health problems?
3. How is MST compatible with the existing organization, priorities, policies, and services for children, youth, and families in Hawaii's public mental health system?
4. What were the barriers to the effective implementation of MST?
5. What actions served to facilitate the implementation of MST (e.g., training, certification, staffing, reimbursement, referrals)?
6. Is implementation of MST in Hawaii characterized by fidelity to the MST model (e.g., therapist adherence, target populations)?
7. Are there functional improvements for children and their families receiving MST?
8. What is the fiscal and operational impact (e.g., service utilization, expenditures and cost savings) associated with the provision of MST services?

EVALUATION METHODOLOGY

Data collection was initiated on December 3, 2001. Interviews were conducted December 3, 2001 through December 7, 2001. Documents and secondary data were collected and analyzed through December 13, 2001.

SECONDARY DATA SETS

CAMHMIS Data

Child and Adolescent Mental Health Management Information Services (CAMHMIS) provided an administrative data set pertaining to service utilization and costs. It should be noted that these data were extracted from a management information system developed to address administrative, rather than evaluation purposes. The CSRG evaluation team identified several challenges associated with analyzing MST data, as compared to other mental health services data in the data set. Although it was requested, a comprehensive data dictionary that listed the data fields (and an explanation of acceptable values) within the CAMHMIS database was not provided. In terms of the values for utilization variables, the MST unit of service is one month in duration (other mental health services are typically reimbursed by the minute or hour) and the MST unit costs were estimated (other mental health service costs are reimbursed according to a fee schedule). Although this may be an administrative decision within the program or budget divisions, the effect renders the MST data in the CAMHMIS system less useful for ongoing monitoring and evaluation activities. Thus, it is difficult for internal and external evaluation activities (e.g., cost and utilization comparisons among services) to be conducted using the MST Home-Based data. Finally, the CAMHMIS system underreports actual MST service utilization data and costs due to lack of data entry of service authorizations at the Family Guidance Center Level. While the data set extracted from the CAMHMIS database contains 216 records for MST services during FY2001, it appears that 312 children and adolescents were actually served through the MST Home-Based program during FY2001. This determination was made by comparing actual utilization records and data collected for program administration and monitoring purposes through the provider agencies and collated by the MST Coordinator. It appears that much of the discrepancy can be attributed to underreporting from one MST site (Hilo). Subsequent recommendations in this report address strategies for improving data collection and analysis. Despite these challenges and concerns about data quality issues, the data from the CAMHMIS system were mined successfully to provide information on MST utilization, costs, and the demographics of clients served.

DOH/CAMHD Data

DOH/CAMHD provided summary budget and contract expenditure information by provider agency and site and for the entire MST Home-Based program. This document cited actual costs specified in each contract and was used, in combination with the CAMHMIS data set, to more accurately determine MST Home-Based costs and specifically link these costs with service provision. In addition, DOH/CAMHD (and provider agencies) provided public domain documents (e.g., memoranda, training materials, practice guidelines, referral guidelines, etc.) for review by the CSRG Evaluation Team.

MST Home-Based Program Data

Two databases were developed and maintained at the program level by the MST Home-Based Coordinator. These databases contained myriad process and outcome data for children and families served in the MST Home-Based program. The variable fields identified for collection were generally appropriate and the informal data dictionary was useful (with some clarifications). However, comprehensive and timely reporting from the various sources (i.e.,

each provider agency, juvenile justice, education), particularly with respect to post-MST treatment follow-up information appeared to be problematic. It was noted that recent information was more comprehensive; thus, FY2001 data were extracted for analysis. In addition, issues such as accuracy (e.g., links among DOH/CAMHD data sources to verify data), organization (e.g., formatting data fields, developing a "stand alone" data dictionary, standard database protocols for collection, entry and monitoring), and ongoing utility (e.g., feedback mechanisms for stakeholders, canned reports) need attention. Mechanisms should be identified to streamline reporting and conduct ongoing monitoring functions. Subsequent recommendations in this report address strategies for improving program monitoring using these promising data sources.

In general, characteristics of the available data (from all DOH/CAMHD sources) provided a true challenge to the evaluation team. The evaluation team struggled to understand the characteristics of the data fields in each data set and forge meaningful links among complementary (or even identical) data from each data set. Thus, where the same measures were presented in multiple data sets (e.g., numbers served, costs, success rates), it was difficult to identify which data source was most accurate for analytical purposes. Despite these challenges, the evaluation team has identified useful information from these data sets for analysis. However, these issues should be systematically discussed and addressed within DOH/CAMHD to ensure that in the future, ongoing, internal evaluation activities can be conducted to permit current performance to be used to directly derive policy in an evidence-based manner.

MUSC Data

The Medical University of South Carolina (MUSC) was involved in a randomized clinical trial designed to investigate the efficacy of the MST-Based Continuum of Care. That is, children and adolescents who were enrolled in the study were randomly assigned to the Continuum of Care treatment group or the regular services treatment group. Although the Continuum of Care services and the study were stopped early at the Hawaii site, baseline and follow-up measures (at six months) were available. MUSC removed all identifying information of participants and directly provided these data to the CSRG Evaluation Team in electronic format.

INTERVIEWS

Since January 2000, DOH/CAMHD implemented ten MST Home-Based teams throughout the State. This included five teams on Oahu, three teams on Hawaii and two teams on Maui. Each team is comprised of approximately four therapists and one supervisor. As of December 3, 2001, there were 35 MST therapists and ten team supervisors across the state. The ten teams are operated by three agencies, Parents and Children Together (PACT), The Institute for Family Enrichment (TIFFE), and Child and Family Service (CFS). PACT and CFS are not-for-profit agencies, while TIFFE is categorized as a for-profit agency.

Semi-structured interviews were administered to DOH/CAMHD administrators, clinical directors from provider agencies, MST team supervisors and MST clinicians. Three doctoral-level interviewers with training and experience in program evaluation and clinical services conducted the interviews. During the first week of December, 38 interviews were conducted on-site at provider agencies or DOH/CAMHD facilities on Oahu, Maui, and Hawaii by the CSRG evaluation team. All participants were interviewed individually. Interviews with supervisors and administrators lasted approximately one hour while interviews with therapists ranged from 30 to 60 minutes. The interview protocols addressed respondents' perspectives on the implementation, organization, delivery and effectiveness of MST services through the public mental health

system. Participants were asked to reflect on their own experiences and the experiences of their teammates (therapists) as they responded to interview questions. They were asked to cite specific examples that illustrated how MST cases progressed through the DOH/CAMHD and DOE systems. Participant responses to the interview questions were recorded on paper by the interviewers. To protect confidentiality, participants were not identified by name in the interviewers' notes.

All interviewees were provided information on the scope of the evaluation and interview consent forms to complete prior to the interviews. By signing the consent forms, interview participants indicated that:

- They understood the purpose of the evaluation;
- They understood the type of information that they would be requested to provide;
- Their participation was voluntary and they could refuse to participate at any time without any penalty, and
- The information they provided would remain confidential and would be reported in aggregate form in the final evaluation report.

SAMPLING OF RESPONDENTS

At the team level, all ten supervisors were selected for interviews. All of the supervisors agreed to participate and the response rate was 100% (10/10). Seven supervisors were female and three were male. All supervisors were interviewed at a provider agency office.

A stratified, random sampling approach was used to select therapists for interviews. Using a random number table, the CSRG Evaluation Team randomly selected two therapists per team for interviews. During the time scheduled for interviews, one therapist was on vacation and two therapists were in court. The therapist pool was re-sampled and replacements were identified for two of the therapists, while the interview for one was canceled. All therapists selected and scheduled for interviews agreed to participate, resulting in a 100% (19/19) participation rate. All therapists were interviewed individually at a provider agency office.

Table 1 : Therapists Selected for Interviews by Team

Team	Agency	Island	No. of Therapists	No. of Therapists Selected
East Honolulu	PACT	Oahu	4	2
West Honolulu	PACT	Oahu	3	2
Central Oahu	PACT	Oahu	4	2
Windward Oahu	TIFFE	Oahu	3	2
Leeward Oahu	CFS	Oahu	4	2
East Hawaii	TIFFE	Hawaii	2	2
South Hawaii	TIFFE	Hawaii	4	2
West Hawaii	CFS	Hawaii	3	2
Maui Central	PACT	Maui	4	2
Lahaina/Molokai/Lanai	PACT	Maui	4	2

Source: DOH/CAMHD, December 2001.

At the agency level, five clinical directors were identified for interviews. Four of the five were interviewed at a provider agency office. One interview was cancelled due to a scheduling conflict. Three of the clinical directors interviewed were male and one was female.

Five DOH/CAMHD administrators were identified for interviews: CAMHD Chief; Branch Chief, Maui; MST Specialist (Coordinator of the Home-Based MST program); the Assistant to the Clinical Director, DOH/CAMHD; and the former Acting MST Administrator (current Special Projects Coordinator, DOH/CAMHD). All interviews were conducted in-person at DOH/CAMHD facilities, except the Branch Chief interview whose interview was conducted via telephone.

An Educational Specialist from the State Department of Education's School-Based Behavior Services and Support Branch (Division of Learner, Teacher, and School Support) and the Special Projects Coordinator/Trainer for Judicial Circuit were interviewed to gain an education and juvenile justice perspective. Finally, two representatives from Hawaii Families As Allies were interviewed via telephone to get a family perspective.

It should be acknowledged that service providers (i.e., therapists and supervisors) are likely to be supporters of a mode of therapy that they implement on a daily basis. For example, several therapists humorously noted that they "didn't want to talk themselves out of a job." However, all of the interviewers were highly experienced professionals, with carefully honed interviewing skills and analytical methods. The CSRG Evaluation Team is confident that the semi-structured interview protocols utilized by the interviewers yielded valid findings across the 38 respondents.

Although respondents were assured that individual findings would be aggregated and presented as group findings and that the information they provided would remain confidential to the extent possible by law, many respondents clearly expressed concerns about confidentiality and how the findings would be interpreted and ultimately used. The interviewers made efforts to allay the trepidations of the respondents and reported that the majority of the interviews could be characterized by frankness and openness among respondents.

FINDINGS

HOME-BASED MST CASE DEMOGRAPHICS

During the previous fiscal year (FY2001), which ran from July 1, 2000 through June 30, 2001, 312 children and adolescents received MST Home-Based services. This figure was determined through review of records maintained in the MST Home-Based program database and validated by the CSRG Evaluation Team. While the MST Home-Based program databases do not contain detailed client level demographic information, the CAMHMIS database maintained by the DOH/CAMHD has this type of information for a subset (70%; 216/312) of the children and adolescents receiving Home-Based MST services during FY2001. It should be noted that the CAMHMIS database underreports the number of clients serviced (primarily from the island of Hawaii). However, it is assumed that the breakdown of demographic data provided below in Table 2 is representative of all 312 clients who received MST services. In general, the higher proportion of males (70%) and older adolescents (age 15-17; 69%) served is consistent with demographic expectations and findings from national studies regarding youth with willful misconduct. Finally, the ethnic breakdown, particularly the high proportion of youth who self-identified as mixed race or other (62%) matches descriptions provided by MST service providers during interviews.

Table 2: MST Home-Based Services Client Demographic Information

Key Demographic Characteristics	Number	Percent
Gender		
Male	153	70%
Female	63	30%
Age		
9-13	28	13%
14	37	17%
15	48	22%
16	48	22%
17	55	25%
Ethnicity		
Asian	18	8%
White	27	13%
Pacific Islander	36	17%
Mixed	44	20%
Other	91	42%

Source: CAMHMIS, FY 2001 (N=216 Home-Based MST cases)
Note: Percents may not sum to 100 due to rounding error.

It should be noted that referrals to MST Home-Based Services are not made on the basis of diagnosis. Rather, the foundation of these referrals is focused on problem or referring behaviors. However, CAMHMIS tracks the primary diagnosis for all clients receiving services (including MST). Thus, this variable can serve as a proxy measure for the type of problems typically exhibited by MST Home-Based clients. As noted earlier, MST Home-Based services have an extensive empirical knowledge base regarding effectiveness for

youth with conduct or antisocial personality disorders involved in the juvenile justice system. Thus, it is not surprising that 38% (82/216) of the MST clients have conduct disorder or oppositional defiant disorder, 24% (52/216) have ADHD or some other type of behavioral disorder, and 6% have substance abuse problems as their primary diagnosis. Thus, the figure of 68% (148/216) for youth with these types of diagnoses appears appropriate for the population served with MST Home-Based services. It should also be noted that the data set only contained information on the primary diagnosis identified for MST cases. Thus, it is likely that children with other problems listed as their primary diagnosis may have a co-morbid (i.e., they may have multiple disorders) secondary diagnosis that is consistent with conduct or antisocial disorders.

Table 3: Primary Diagnoses of Clients Receiving MST Home-Based Services

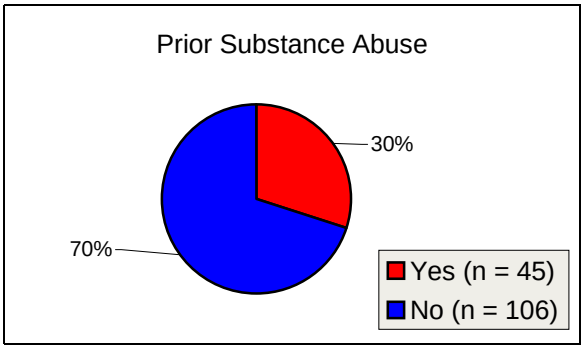
Primary Diagnosis	Number	Percent
Conduct D/O, Oppositional Defiant D/O	82	38%
ADHD/Behavioral D/O	52	24%
Anxiety, PTSD, Affective/Thought D/O	37	17%
Adjustment D/O, V Codes/Deferred Diagnosis	19	9%
Substance Abuse	14	6%
Other/None Identified	12	6%
Total	216	100%

Source: CAMHMIS, FY 2001 (N=216 Home-Based MST cases)

YOUTH STATUS PRIOR TO RECEIVING MST HOME-BASED SERVICES

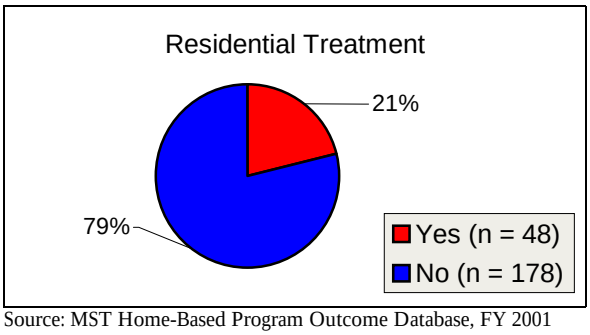
Before examining the outcomes of youth served in MST Home-Based services, it is important to understand their experiences prior to the receipt of treatment. Data on pre-MST status were provided in the MST Home-Based Program Outcome database. Based on youth for whom data were available, 30 % (45/151) had a documented substance abuse problem and 21% (48/226) had been to residential treatment prior to receiving MST Home-Based services. DOH/CAMHD administrators emphasized that MST Home-Based services were introduced, in part, to divert children and youth from high cost residential treatments that were provided far away from their families and natural communities. In this respect, evidence suggests that the DOH/CAMHD appears to be effectively targeting the appropriate population.

Figure 1: Evidence of Prior Substance Abuse Among Clients Receiving MST Home-Based Services



Source: MST Home-Based Program Outcome Database, FY 2001 (N=151)

Figure 2: Evidence of Prior Residential Treatment Among Clients Receiving MST Home-Based Services



Source: MST Home-Based Program Outcome Database, FY 2001 (N=226)

It should be noted that a significant amount of data were missing (or simply unavailable for collection) regarding the pre-MST status of youth. Thus, these figures should be interpreted cautiously. Data on living arrangements were available for 144 youth at the time of referral: 104 youth were living at home, 14 were in hospital-based residential treatment, 11 in DH, 8 in HYCF, 7 in community-based residential treatment, and 8 were in other placements. In terms of their school placement at the onset of MST Home-Based services, data were available for 125 youth: 33 youth were in regular education, 38 in special education, 25 had combined regular/special education, 11 had alternative day treatment, ten had alternative education (e.g., alternative learning center, special treatment facility, special motivation classes), five had home tutoring, one in residential treatment, one in vocational school, and one was incarcerated.

THE MST HOME-BASED REFERRAL PROCESS

The MST Home-Based referral process involves several systematic steps that are depicted in the flow chart in Appendix A.

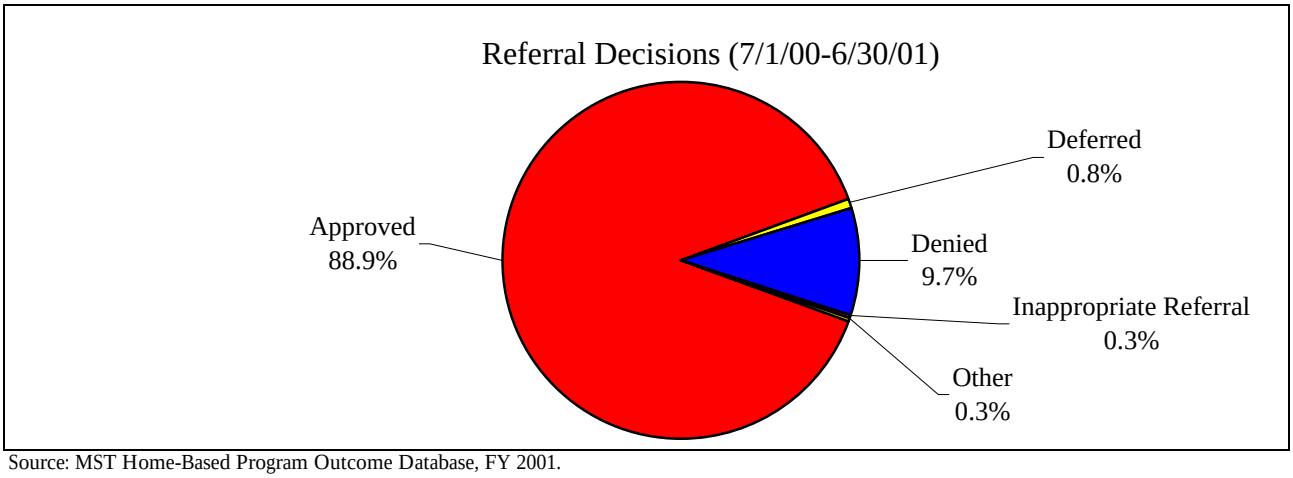
The referral process for MST Home-Based services usually starts within the school system. That is, a child or youth typically is exhibiting learning or performance problems. Upon further investigation by school-based mental health professionals and through the IEP process, a determination may be made that the child requires high intensity services that are more appropriately provided through the DOH/CAMHD, rather than the DOE. The school system contacts the DOH/CAMHD and a care coordinator (who acts as a case manager) is assigned to the child and his/her family. The care coordinator assures that all appropriate assessment activities and services are scheduled and provided.

When a youth is identified as possible referral for MST Home-Based services, members of the treatment team, which can consist of the care coordinator, teachers, school-based student services, MST coordinator, probation officers, immediate and extended family members, and the youth, discuss current needs, review available services, and determine the eligibility of the youth for MST. If MST is deemed appropriate for the youth, he/she meets the eligibility criteria, and the family understands and agrees to participate in Home-Based MST services, the care coordinator or the mental health supervisor at the regional family child guidance center sends a completed referral form, along with a recent psychological/psychiatric evaluation (i.e., within one year) and a listing of recently utilized mental health services to the MST Home-Based Coordinator. The MST Home-Based coordinator reviews the characteristics of the referral (i.e., age, evidence of willful misconduct, risk of out-of-home placement, diagnostic and behavioral assessments, parent consent) and makes a decision regarding whether the referral is appropriate for MST within two business days. If the case is approved, the care coordinator or the mental health supervisor sends a packet of information (i.e., service authorization, evaluations, signed referral form, CSP [Care Service Plan], Individual Education Plan [IEP]) to the MST supervisor or intake coordinator at the nearest MST site for therapist assignment. Once the case is assigned to the team by the MST Home-Based Coordinator, the MST team supervisor or MST therapist must have face-to-face contact with the family within 72 hours (including weekends and holidays) or must inform the MST Home-Based Coordinator of the reasons for no contact within the time limit. During the initial contact, the MST supervisor and MST therapist attempt to engage the family and explain the MST model to the family. Informed consent is sought from the family, and once the consent is signed, MST services begin.

Based on information from the MST Home-Based Referrals Database (from July 1, 2000 through June 30, 2001), the average amount of time between MST Home-Based referral and treatment decision was four days, with 32% of the decisions made on the same day as the referral, 17% of the decisions made within one day, and 7% within two days. No significant differences were found across the ten MST teams. As shown in Figure 3 below, the vast majority (89%) of referrals were ultimately approved to receive Home-Based MST. Among those who were deferred, denied, or had other decisions made, the most common reasons were that the youth did not meet the eligibility criteria for MST (e.g., too young, too old, inappropriate diagnosis, sex offender), other services were pending or were deemed more appropriate (e.g., Continuum of Care, residential treatment, therapeutic foster home, correctional facility), or refusal from family members to participate in a family-focused therapeutic intervention. According to some therapists, there may be more inappropriate referrals on the outer islands because there isn't a complete array of available services. There is a perception that for some children it is "MST or nothing or residential care."

> In the beginning, we perceived more of our referrals as inappropriate. However, now that our program is up and running, we've figured out what to do." ---Supervisor

Figure 3: Home-Based MST Referral Decisions



Source: MST Home-Based Program Outcome Database, FY 2001.

As noted earlier, children and youth who have exhibited willful misconduct are the target group for Home-Based MST services. While referrals are made on the basis of behaviors, the data demonstrated that most of the clients have ODD and/or ADHD listed as a primary diagnosis in their psychological evaluations. Similarly, most teams reported that they received a range of children in terms of diagnosis and "service experience." Some have been in the system for years, are more involved and have received prior services, while others are new. However, therapists and supervisors reported in interviews that a significant proportion of the children and adolescents served through Home-Based MST are those kids who have "been receiving services for years" and have been termed "difficult to work with." For many of the older adolescents who have progressively declined, respondents reported that MST might be viewed as a "last resort."

> "95% of our referrals are appropriate. This is what I would expect." ---Supervisor

The current referral process ensures that teams don't "cherry pick" and refuse difficult cases. However, DOH/CAMHD administrators noted that the ultimate goal is for the referral function to move to the team level—when MST is understood and routines established. The referral process appears to be well-developed with specific mechanisms for action, clearly defined roles for various service administrators and providers, and time limits associated with referral actions so that children and their families do not fall through the cracks and can receive the therapeutic services that they need in a timely manner. However, in practice, there appear to be several areas in which the process is experiencing problems.

Several supervisors and therapists reported that DOH/CAMHD policy specifies that all of the background information needed to begin a case must be in the file when it is transferred to the team. However, inadequate files are frequently provided to the teams. The team has 72 hours to make face-to-face contact with the family—and without complete, accurate, and up-to-date information, and some of the therapists feel they are "going in blind" and are unable to provide the best services possible until they have the background that they need. Many therapists indicated that the caseload of care coordinators has been historically high and that this may contribute to files with missing information. In some cases, team staff reported that the introduction of MST was "news to the family," even though the care coordinator indicated on the referral form that the family understood the requirements and family focus of MST and had agreed to participate in MST. Some respondents felt that they spend too much time explaining MST to parents and getting them "on board"—a task that they assumed care coordinators would have covered during the referral process. Additionally, the care coordinator has no time requirements for turning around information. Unfortunately, this sometimes results in significant delays for cases that are deferred or missing significant information (e.g., evaluations, IEPs).

Many teams have experienced problems getting enough referrals to meet their capacity for providing services. According to DOH/CAMHD policy, MST should be the first service considered by the IEP team and the care coordinator in making their service recommendations for children and adolescents with willful misconduct, conduct disorders and oppositional defiant disorders. This expectation has not borne out at all family guidance centers across the State. Therapists and supervisors indicated several potential explanations for why they are not serving children up to capacity.

- Some therapists and supervisors observed that some care coordinators simply do not know enough about the MST model. Because they understand intensive home-based services and are comfortable making referrals to intensive home-based services, MST is simply not viewed as an option for referral.
- Many therapists simply said that some care coordinators do not believe in the MST model; therefore, they do not make MST referrals.
- Some therapists and supervisors felt that referrals from care coordinators were based, in large part, on the care coordinator's experience with previous referrals (i.e., was MST successful in the past?) and the personal relationship that care coordinators have with therapists (i.e., care coordinators want to refer cases to therapists that they know are competent and an appropriate match, given the characteristics and history of the case).
- Several therapists lamented that many care coordinators and other members of the public (including potential MST client families) do not understand the distinction between MST Home-Based services and The Continuum of Care. Many reported that the "bad press" associated with The Continuum has affected their ability to effectively deliver MST Home-Based services—an entirely different therapeutic program.

However, multiple sources cited efforts that have been made to address these problems:

- The new clinical standards for the current fiscal year state that if cases meet criteria for MST Home-Based, then the care coordinator **must** consider a referral to MST. Although they were pleased with this clearly articulated guideline, some supervisors and therapists lamented that there is little oversight or monitoring of this policy.
- Some supervisors noted that it took significant effort on their part to educate care coordinators and school personnel about MST. One therapist stated that the team actively "markets" MST to the care coordinators. Other supervisors routinely conduct MST information presentations at local schools to educate school personnel who may initiate mental health referrals during the IEP process.
- Supervisors reported that it can be difficult to match staffing (capacity) and service provision. There is a need for a more strategic approach. Some therapists and supervisors noted that they try to work strategically with the care coordinators in an attempt to match service provision with service capacity. For example, supervisors will let care coordinators know weeks in advance when they anticipate an opening—to allow care coordinators to plan ahead or stagger their referrals.
- Several supervisors and therapists noted that some probation officers have changed their minds about MST. That is, they were initially skeptical but observed positive changes in their juvenile offenders. Some providers observed that judges carefully consider the recommendations of parole officers and noted that these folks were becoming supportive of MST, as well. Again, the MST staff stated that as part of the MST model they must work closely with all of the folks who are part of the child's life—and this includes law enforcement.

These efforts should continue and be supported by DOH/CAMHD policy and activity.

As noted above, several therapists described (in detail) how they, their supervisors, their agencies, and the DOH/CAMHD administrators spend a lot of time educating care coordinators at child guidance centers and school-based personnel who identify children for referral about MST. Popular **misconceptions** about Home-Based MST among care coordinators, school-based personnel and families include:

- MST is child-centered. Sometimes parents agree to participate in MST and then change their minds when they learn that the focus of MST therapeutic activities is the family and not necessarily the child. MST requires the willingness of at least one parental or care-giving figure to participate in therapeutic activities. Some parents are simply not prepared to spend so much time working with a therapist and are not willing to consider making any changes within the family.
- "24/7" means that the therapist's responsibility is to "solve" all of the family's crises as they happen. There may be expectations that when the child is misbehaving, the therapist will come and temporarily remove the child from the family—especially for families who have had prior involvement with mental health services. Many families incorrectly expect 24/7 respite services from the MST therapist.

MST TEAM STAFFING

The background education and training of therapists ranged from bachelors through masters degrees. About half of the therapists had some type of clinical training (e.g., clinical social work, social work, counseling psychology, marital family therapy, pastoral counseling, education specialist, marriage and

family counseling, community mental health) or clinical experience (e.g., therapeutic foster care, licensed professional counseling, medical social worker, intensive in-home therapist, detention center juvenile counselor). Most had work experience in human services (e.g., care coordinators at family guidance centers, supervisors in another type of therapeutic program, victim's services, sexual assault services, domestic violence, Healthy Start, family preservation, drug rehabilitation, day treatment, group homes, parent-child educator, and day treatment. The length of time as an MST therapist ranged from 2 to about 18 months. All of the MST team supervisors had masters or doctoral level training and significant clinical experience.

Therapists provided a number of reasons that led them to become MST therapists, including:

- Several therapists were previously employed as home-based therapists and wanted to work with a family focus,
- Lower caseload,
- Less paperwork,
- Job security, albeit much lower pay (and no overtime pay),
- One therapist stated that he/she applied for the position because he/she wanted to learn MST. He/she knew it was evidence-based and believed that interventions that empowered parents would be most effective in the long-run.

MST therapists noted a number of features that they enjoyed about their jobs. Several therapists mentioned that the work was interesting and flexible. Some of the therapists who were previously employed as intensive home-based therapists reported that they found MST more satisfying, fulfilling and worthwhile than their previous positions. About half of the therapists specifically mentioned that they enjoyed the team structure and supervision. One therapist indicated that the community he/she serves has tremendous needs. He/she felt that his/her work as an MST therapist had a ripple effect in the community, beyond the case child. A few therapists commented on the aspects of personal responsibility assumed by the family through the course of MST therapy.

> "I really like the MST model because I believe in the strengths-based perspective." --- Therapist

> "MST is not something that a therapist "does" to a family. The family really does all of the work and deserves the credit for making changes—that are more likely to long-term in nature. I like this." ---Therapist

When hiring, supervisors typically look for a masters-level clinician with human services work experience. The ideal therapist must have flexible hours and be willing to work on weekends and nights. One supervisor explained that the therapists must function as a true team, providing ongoing insight and advice and covering for each others' cases on occasion. To be an effective team, therapists must work well together and get along. Thus, one supervisor noted that the entire team is involved in the hiring process. Other desirable qualities in an MST therapist included: an understanding of the language and culture in the local community, high emotional quotient (EQ) or "clinical sense," good interpersonal skills, grace under pressure, and an ability to work within all types of systems.

Several supervisors and a few therapists emphasized the importance of clinical training and clinical skills for conducting effective MST therapy. One masters-level therapist observed that MST therapy is largely characterized by "layman's logic" (e.g., implementing basic parenting skills). However, clinical training provides tools and techniques that allow the therapist to assess the situation from different angles when there are problems with progress. Without clinical training, several supervisors felt that therapists may flounder with more complex cases. For example, it may be difficult

for a non-clinically trained therapist to determine functioning beyond the information provided from the formal psychological evaluations. They noted that therapists without clinical training were typically weaker when they encountered psychiatric issues and when they had to deal with other professionals in the service system (e.g., psychiatrists and psychologists). Several supervisors indicated that they would prefer masters-level therapists (as the MST model specifies) but admitted that the labor pool was very limited in the State of Hawaii. One supervisor planned to recruit clinical social workers in the future because they typically had an ecological perspective built into their training and they have clinical skills that address how to manipulate and empower systems.

"MST is more than just a parent training program. The therapist needs an analytical eye, techniques for evaluating behavior, and strategies for achieving individual and system changes that are all rooted in an understanding of clinical processes." ---Supervisor

All clinical directors and supervisors reported that staffing has been a challenge, especially early in the implementation of Home-Based MST. Many therapists, particularly those employed in other therapeutic contexts such as intensive home-based services or therapeutic aid, described how they were not keen about the MST Home-Based model when it was first introduced. Many had heard "bad things" about the Continuum of Care and did not understand that the MST Home-Based program was entirely different. Others are concerned about job security, given rumors that MST Home-Based may be eliminated soon. More importantly, the theoretical orientation of the MST Home-Based program was difficult for many therapists to understand and ultimately practice. Most of their previous training and experience was using client- or child-centered therapy. Switching to a family-centered model was challenging for many therapists. This change in theoretical orientation was a significant contributing factor to initial therapist turnover when the model was first implemented.

"A paradigm shift is necessary to comply with the MST model. I am glad that I started this job early in my career." ---Therapist

Indeed, some supervisors felt that therapists with a lot of experience were more biased by their theoretical approach. They emphasized that MST therapists have to be especially open-minded. Because MST doesn't emphasize a diagnosis as the starting point for therapy, it is a real paradigm shift for many therapists. Several supervisors emphasized that therapists need to be open to the significant amount of feedback that is prescribed by the model. Unfortunately, many licensed professionals aren't familiar or comfortable with such a high degree of feedback. Many don't like the direct analysis of their work and the amount of direction from the supervisor. A few respondents observed that therapists coming from a behavioral orientation were more likely to be satisfied using MST than those with an insight or psychodynamic background. Several supervisors also noted that it is difficult to be on-call 24/7. Several respondents observed that therapists with a significant amount of their own family responsibilities have found the job especially difficult (e.g., single parents).

Retention is a big problem. In fact, several supervisors and clinical directors indicated that retention was a greater concern than recruitment. One clinical director indicated that the agency conducts "exit interviews" in an attempt to understand why there is turnover and how it should be addressed. Many cited strategies that they used to keep therapists happy (e.g., praise and positive reinforcement, scheduling intense clients, periodic respite while cases were covered by the supervisor). Some noted that much of the therapist turnover that occurred early in the program was desirable.

That is, many of those therapists simply could not make a theoretical switch from child-centered therapy to family-centered therapy or preferred a more autonomous therapeutic setting and could not handle such a large amount of direct supervision. If a therapist was unhappy (and potentially unmotivated and unsuccessful) working with the MST Home-Based model, turnover could be considered a desirable outcome from a staffing perspective.

THERAPIST TRAINING

MST therapist training is offered semiannually in Hawaii. New therapists may also be sent to training on the mainland at other times at agency expense. On-site booster training is offered on a quarterly basis. Prior to quarterly boosters, therapists and the supervisors identify what type of training they will need and what the consultant should provide. Across the board, every respondent was generally pleased with the initial MST training and particularly, the quarterly boosters. The majority of respondents found the training to be very well organized and intensive. One therapist noted that the training was respectful of local values and respectful of those served. At the end of training, a test is administered to help therapists identify their weaknesses and develop plans to address them. All of the therapists appeared well trained and competent, regardless of their experience and clinical training. They understood and could explain the MST model to the CSRG Evaluation Team. Similarly, they could effectively illustrate model components using examples from their cases.

> "I particularly liked the case conceptualization and role-playing part of the training, putting abstract ideas into concrete examples." --- Therapist

SUPERVISION

When asked to identify the most important component(s) of the Home-Based MST model, the majority of therapists and supervisors identified supervision and consultation. They emphasized that MST did not adhere to a top-down type of quality control. Rather, in a broad manner, over time, there are mechanisms and processes built into supervision and consultation that help the MST team to stay on track, remain focused on their goals, and be accountable to the family, the supervisor, and the MST model. Therapists complete weekly reports on each MST family. These reports specify overarching goals, previous intermediary goals, potential barriers to intermediary goals, strength-based advances, and new intermediary goals. These reports are very specific and help therapists to focus on the specifics of what must be done by therapist and the family during the following week. One therapist noted that this was like having a new (or revised) treatment plan every week. In other types of therapy, supervision was monthly and the therapist was much more independent with less support. Most MST therapists indicated that they preferred the MST model with weekly supervision and consultation.

To keep therapists focused and on track, each week:

1. The supervisor reviews the weekly reports and recommends changes.
2. The consultant reviews the weekly reports and recommends changes.
3. The therapists and supervisors have a weekly team meeting to review and discuss all cases.
4. Supervisor and consultant revisions are made to intermediary goals stated on the weekly reports.
5. The team reviews all cases for one hour with consultant, via telephone.

Teams typically have supervision for two hours per week and consultation for one hour. In addition, some team supervisors offer one hour of individual supervision on a weekly basis. Respondents indicated that there is also a great deal of telephone contact and ongoing or informal supervision with the team supervisor

and the other team therapists. At weekly supervision meetings, the therapists and supervisor review all cases for all team members, review intermediary goals from the previous week, and identify new intermediary goals, strategies and barriers. Most therapists noted that other team members are extremely familiar with each others' cases and that they appreciate the degree of support they have for their cases.

> "Usually our families are so complex—you need all that feedback." ---Supervisor

CONSULTATION

Nearly all therapists and supervisors heralded the utility of the consultant process. However, some therapists indicated that they would prefer a local MST consultant. A local consultant would be able to respond immediately to telephone calls and emails (i.e., no time zones to consider). Respondents suggested that a local consultant might be able to work more intimately with the teams:

- He/she would have more face-to-face time with teams.
- He/she would provide immediate and specific feedback on team concerns, especially in crisis situations.
- He/she might remove some existing layers of bureaucracy that must be navigated when therapists have problems that are more therapeutic (versus administrative) in nature. That is, therapists might have more direct and ongoing access to the consultant services.
- The external consultant may be perceived as an outsider and reinforce the idea that MST is "external to Hawaii" and not "of Hawaii." A local consultant might be more familiar and mindful of how local and cultural concerns impact the delivery of any services. Currently, the team supervisors provide a "filter function" on information provided by the consultant. The supervisors review the specifics to ensure that consultant recommendations are ethical in the Hawaiian context and culturally sensitive to the families served.

THERAPIST ADHERENCE MEASURE (TAM)

The Therapist Adherence Measure (TAM) is an interview measure used by every MST team. For those therapists with clients involved in the NIMH study conducted by MUSC on Home-Based MST, a research assistant telephones the family for feedback on therapist adherence on a weekly basis. This information is then provided to each site on a quarterly basis. For therapists whose clients are not involved in this study, an agency employee conducts that same function and this information is provided to supervisors on a weekly basis. The TAM measures therapist adherence to MST principles on six scales: Adherence, Nonproductive Sessions, Therapist-Family Problem-Solving Effort, Therapist Attempts to Change Interactions, Lack of Direction, and Family-Therapist Consensus. Although an empirically validated questionnaire, it should be noted that this instrument is still under investigation and refinement. While the TAM does not rate therapist performance or success in working with the child or family, the therapists and supervisors generally regard the TAM positively as a useful tool for verifying that the therapist is engaged in activities that are consistent with the MST model.

The CSRG Evaluation Team did not directly examine any TAM data for the Hawaii teams. However, all respondents were interviewed regarding perceptions and use of the TAM. Several therapists and supervisors cited problems with specific items on the TAM. For example, one item queries parents on whether the therapist has the family do all of the work during therapy. Because MST is family-focused, the expectation is that family members will work actively towards achieving goals with the support, insight and strategies of the therapist. However, many families don't want authorities to think that their therapist isn't doing his/her

job and report that their therapist does all of the work. Unfortunately, TAM protocol prohibits the interviewer from explaining or clarifying any items.

There is significant variability in how the TAM is used at the team level. Some therapists report that they infrequently or never see the TAM that their MST families have completed. Some note that they see the TAM, but are unsure how to use the information to improve their scores. Other therapists note that their supervisors review their TAM scores on a regular basis and use the results as a starting point for discussing child and family progress and developing strategies for interacting with the family more effectively.

> "We need instruction on how to use and interpret the TAMS more effectively." --- Supervisor

One supervisor described the TAM as one tool in an array of approaches to monitoring and evaluating therapist performance. For example, therapists are asked to score themselves after engaging with their families. On occasion, the supervisor videotapes therapist-family interactions or watches some fieldwork to provide feedback to the therapist.

CLINICIAN & SUPERVISOR DEVELOPMENT PLANS

In addition to initial training, boosters, supervision and consultation, some teams/agencies require all team members to complete and update clinician and supervisor development plans on a weekly basis. This ongoing professional development activity is structurally similar to the therapeutic services that the teams provide to their clients. Each week, therapists and supervisors, in concert with other team members, articulate overarching/primary MST goals and intermediary goals that will improve job performance and satisfaction. The plan is updated weekly and measures whether previous intermediary goals were met, specifies barriers to intermediary goals, identifies advances in professional development, and states new intermediary goals for the following week. Therapists and supervisors using these tools found them very useful. See Table 4 for examples of therapist and supervisor development plan goals.

Table 4. Examples of Therapist & Supervisor Development Plan Goals

	Therapist	Supervisor
Overarching Goals	◆ Will increase knowledge and skills related to adolescent problems (e.g., violent behavior, self-destructive behavior, running away, truancy, drug & alcohol use) ◆ Will increase knowledge and skills related to clinical supervision and administrative management	◆ Will increase therapists' ability to conceptualize cases (as evidenced by): o Therapists will provide evidence to support hypotheses or behavior drivers o Therapists will articulate details of planned or attempted interventions o Therapists will reference MST principles when developing intermediary goals and interventions
Intermediary Goals	◆ Review clinical supervision materials ◆ Supervise another therapist through to cases to practice supervision skills	◆ Request clinicians to identify which MST principles they are adhering to when developing their Intermediary Goals ◆ Request a "fit circle" of functional analysis for obstacles, problem behaviors, or crises that have occurred in therapists' cases ◆ Ask therapists how they plan to carry out at intervention and to describe an intervention when it has failed.

MST IMPLEMENTATION

"Administrators were looking for an evidence-based, cost-effective way to appropriately serve children and adolescents with conduct disorders. MST fit the bill." ---Supervisor

DOH/CAMHD administrators stated that the system focus has been changing practice to reflect evidence during the past two years. DOH/CAMHD administrators also emphasized that both MST programs were introduced to address other current mental health issues. That is, they aimed to reduce the amount of residential care and the extremely high costs associated with that type of treatment. Several respondents stated that Hawaii was sending some of their more complex cases to residential care on the mainland—and not only was this expensive, but it was deemed unethical not to have the appropriate services available locally.

"Due to the Felix consent decree, sometimes the service systems are scrambling to put something in writing, get the child some type of "services", and then figure out later what the child really needs. The focus is getting out from under the Felix consent decree." ---Therapist

Most supervisors and clinical directors perceived that MST Home-Based services were introduced in response (at least in part) to the pressures of getting into compliance with the Felix consent decree. They thought that the DOH/CAMHD and DOE were "scrambling" to meet Felix consent decree requirements for providing appropriate services for Felix class children. MST was one option in the array of services available. However, most supervisors and therapists believe that both programs were introduced and implemented too quickly. The appropriate supports were not in place. However, several respondents indicated that while there were wrinkles initially, many of these have been ironed out. One supervisor noted that while the Continuum of Care is "dead," the MST Home-Based program is now in the "repair phase." Several respondents wished that the MST Home-Based program had a different name, so that it wouldn't be confused with the defunct Continuum of Care.

Most respondents explained to the CSRG Evaluation Team that both the MST Home-Based and the Continuum of Care were simply introduced the wrong way. Several respondents reported that MST was introduced as the only thing proven to work, with the implication that every other type of therapy was useless. This approach was perceived as very offensive to experienced therapists who had achieved positive results using other therapeutic modes. There was a significant backlash in response to this tactic. One of the problems cited frequently by therapists and supervisors is that both programs, MST Home-Based and the Continuum of Care were presented as omnipotent programs that would "save" all children and adolescents with conduct disorders. Many agreed that the program was initially oversold and that this approach "turned off" many of the key stakeholders, from families, providers, referring agencies, juvenile justice, education, to health. One therapist stated that MST was introduced in a way that didn't reflect the "Aloha spirit." That is, the introduction wasn't inclusive or multi-culturally sensitive. To make it work, everyone in the community needed to be educated and on-board—not forced. When MST was introduced in Hawaii, it was heralded as something completely new and different. However, one clinical director noted that MST has been in existence for over 20 years and the clinical social work perspective operates with a focus on families and systems.

"Some folks came from the mainland with their PowerPoint presentation to describe a complicated therapy. It was overwhelming and didn't sound like it would work here." --- Therapist

Another problem that affected the introduction of MST was that mental health professionals (at all levels) were very "comfortable" providing intensive home-based therapy and there was a resistance to change--despite a lack of strong evidence regarding effectiveness for current practices. Several therapists and supervisors (including those who had previous work experience in other treatment modalities) observed that some intensive home-based services caused the family and child to develop a dependency on the therapist and the mental health system. Because intensive home-based therapy has no time limits (or there is little monitoring of time limits and the policy is not enforced), this type of therapy can go on for years. Some therapists observed that the therapeutic activities involved in intensive home-based services more closely resembled respite care for parents (e.g., temporarily remove the child at every crisis) or "baby-sitting." One therapist added that with the five month limit and salaried service provision, MST therapists don't need to "carry cases" to make a living.

The CSRG Evaluation Team was not able to interview any therapists that were involved with the provision of Continuum services. Indeed, many of the current therapists had little or no information about the Continuum. Particularly on the outer islands, many of the therapists were not familiar with any of the current "MST controversy" happening in Honolulu. However, some therapists were employed in other programs (e.g., intensive home-based services) at the same time that the Continuum was introduced and observed that the attitude of some therapists in the Continuum program was inappropriate. That is, those therapists believed and acted as if the Continuum was an elite program that would guarantee results. Thus, there was some animosity among therapists within the same agencies who were providing different types of therapy. DOH/CAMHD administrators reported that the primary reason the Continuum of Care program ended was "because the population necessary to recruit from was no longer there due to the increased efficiency in treating this population."

Therapists were concerned about the bad reputation that MST-based Continuum of Care has in the media, public opinion, and the legislature. Many were concerned that Home-Based MST will be eliminated. Other respondents were concerned that due to all of the "MST controversy," a bare-bones version of MST (e.g., "MST-lite") might be introduced under a different name. It should be emphasized that it is inadvisable to use only selected MST components and expect positive results because it is the model that is empirically validated and not stand-alone components of the model.

MST SERVICE DELIVERY

Several respondents intimated that the key variable associated with successful treatments, per se, wasn't the MST program. Rather, it is the talent, ability, and clinical skills of therapists to increase engagement and enhance collaboration among systems. They observed that MST provides the framework that encourages this type of work to be done effectively. See Table 5 for representative comments of respondents regarding goals, processes and timing associated with the MST model.

"The model is logical and sensible." --- Therapist

Table 5. Thematic Respondent Comments on MST Service Delivery

Goals	Processes	Timing
• "Every visit to a family has a task, a goal, and a plan. There is nothing accidental about what happens in MST therapy." ---Therapist • "If you're at the front door and you don't have a plan going in to meet a family, leave—otherwise everyone's time will be wasted." ---Therapist • "We're aware that many kids have had prior mental health services and that the families know the "pattern of mental health services." We focus on what we will be doing and the types of interventions that are in our repertoire, rather than what was done, therapeutically, in the past." ---Therapist • "The goal of MST is long-term—to empower parents to get their children to make lasting changes in their behavior. My experience and observations about child-centered theory show that it is more short-term. While behaviors may change, the change is not necessarily lasting." ---Therapist	• "Unless you get to the root of a behavior and understand why the behavior is happening, you can't come up with any solutions." ---Therapist • "We try to find the solutions, approaches, interventions that fit the problems and directly address the behaviors that the child is exhibiting. We spend a lot of time with the parents and other folks who have an impact on the child's life. With an understanding of the child's life these folks are able to directly address the causes that lead to and propagate the child's behaviors/problems." ---Therapist • "In the past, with other therapies, when crises arose, parents would call the therapist to "come pick up the kid." It is sometimes a challenge to work with these parents to develop skills to prevent these crises and to address and solve the crises within the home. The whole aim of MST is to keep children in the home, not remove them." ---Therapist	• "The MST model should take three to five months. If the therapist and family are not seeing measurable change by that point, MST is not working and should be stopped." ---Therapist • "With home-based therapy, I felt powerless with the parents. With MST, I can approach the child's behavioral problems from many different angles (not just through the child). I have the time to do intensive, quality work and to follow through each week." ---Therapist • "MST is hard work because the time is short. It is ethically inappropriate to be working with a client for years." ---Therapist • "One of the problems with residential care is that it leads to short-term success. A child may be clean, sober, and well behaved for three to six months, but they are released into the same family environment and peer group that led to the undesirable behaviors. It is a difficult cycle to break without a family-focused intervention." ---Supervisor

According to several therapists, MST challenged the very definition of therapy among families involved in the mental health system, and whose child had received various types of therapy over the years. The Home-Based MST model focuses on behaviors rather than diagnoses. On an ongoing basis, from referral to completion, the therapist completes "fit circles" which are graphical representations that contain a behavior in the center of a circle and the multiple drivers (e.g., causes, antecedent actions or situation) that lead to the behaviors listed around the circle. Multiple fit circles are completed together by the therapist and the family each week to help everyone understand the fit between the child's behaviors and their broader systemic context. Completing fit circles helps the therapist and family to identify new intermediary goals each week and strategies for modifying problem behaviors and supporting positive behaviors. They also help families to monitor change in the child and the child's ecology over time.

The therapist looks at the "referring behaviors" and develops goals with the family, school, probation, or anyone else who is within the child's ecology. The early days of MST with a new case involve gathering information about the child's entire world, or ecology, from those involved in the child's life. This may include: care coordinator, parents or parental figures, family and extended family, the child's friends and peer group, neighbors, regular and special education teachers, community organizations and members, coaches, school-based special services, school administrators, and support services. The therapist can help families with the tools, skills and motivation to make positive changes. However, the MST therapist cannot force change, but must accept the responsibility for identifying creative ways to lead families to the point where they can change on their own.

Several therapists stated that Home-Based MST puts the responsibility back on parents. The "old model" was to separate problem children from their families, develop positive skills and fix their problems in isolation (e.g., individual therapy, day treatment, or residential care), educate the parent on maintenance of positive behaviors, develop a plan for the child to transition back into the home, and return the child to the home. Unfortunately, most children experienced problems within a short period of time because the ecology that supported their problems remained unchanged.

It was reported that therapists typically see the family five times per week in the beginning to get them on track. Over time, they may have less face-to-face contact and more phone contact. Although it is not required, a few therapists described how it was important to "get the child onboard" in the therapeutic process. While the therapist does not have to meet regularly with the child, it may be helpful to speak with child, empower them to change their own behaviors, and forecast what will happen in the course of therapy. Several therapists described how the children were rather unhappy with the therapist as the therapist helped parents and other caregivers to align their efforts and empowered parents to strategically approach and embrace their childrearing responsibilities with support from the therapist and others. Another challenge is that the family can "fire" the MST therapist at any time.

At some agencies, the MST approach has influenced how services are delivered in other therapeutic programs. For example, one supervisor observed how the structure, supervision and a consideration of the impact of the community have been increased. A clinical director also noted that one agency has oriented some of the intensive home-based services to take into account MST concepts (e.g., thinking outside the child).

CULTURAL SENSITIVITY

> "MST is very adaptable. It is like having a new apartment. The structure is MST, but the style and design has to be Hawaiian." ---Therapist

During each interview, respondents were asked to comment on whether MST could and should be adapted to account for cultural and linguistic diversity in the State of Hawaii. Therapists and supervisors described a host of cultural characteristics that impacted how they delivered mental health services to their clients. It should be noted that their perceptions (discussed below) are influenced not only by the cultural context in which they work and the type of clients that they serve, but also their own backgrounds. In particular, it was perceived among respondents that the native Hawaiian and Asian cultures greatly impacted how therapists relate with families. For example, several therapists and supervisors noted that historically, it is shameful to go outside the family for help for any type of problem—particular mental health. Some further elaborated that families are just starting to understand that it is OK to look for and get help. Because it is a small island, there are perceptions that help is always available because "everyone has connections." However, one supervisor stated that, "The problem is that it may not be the kind of help that the family needs."

> "You can't be an "expert" and provide effective services in Hawaii." ---Supervisor

Several therapists noted that they cannot come into the family "cowboy style" (e.g., too directive) and expect to develop rapport. The relationship is built with the family through sharing. For example, many families will typically want to learn more personal details about the therapist. They want to view the therapist as a "family friend." Most Hawaiian/Polynesian families do not want a "stranger" coming into their home and telling

them what to do. It appears that in Hawaiian culture, the lines between professional and personal behaviors of a mental health professional are more blurred. It may be that more successful therapists develop a more personal, rather than a professional relationship with the families that they serve with MST. Similarly, several therapists thought that the MST model should be expanded to four to six months in Hawaii, to allow the therapist time to form and nurture a relationship with family members. Some therapists said that for the first month, the focus is on "building trust and learning about each other."

A supervisor and a therapist reported that the directive nature of the MST model can be offensive to families of Asian or Pacific Islander/Polynesian heritage. Thus, they emphasized that the therapist needs to help the family understand why the model is directive. Plus, he/she could phrase directions as recommendations and specifically apologize for being so forward.

Respondents noted that the influence of the extended family and community are very important in a number the cultures of Hawaii. It is important:

- To establish relationships with all of these people—a required first step in providing any kind of service or to get therapeutic work done,
- To understand the expectations of the family, to answer their questions, foster engagement, and "talk story",
- For the therapist to understand the family's structure and their relations,
- To be humble, warm, friendly, and non-judgmental.
- To respect confidentiality (Don't use the "coconut wireless")

It was reported that some families, particularly rural families and those with low education have difficulty understanding MST concepts like the "fit circle." Sometimes they are overwhelmed by the process of identifying behaviors, behavioral antecedents, and strategies for addressing these issues on paper. Thus, respondents agreed that it is important for the therapist to be perceived by the family as patient and not condescending.

For some families, a therapist of the same culture or ethnicity may be comforting. That is, the family might assume that the therapist has an inherent cultural understanding of the family's situation and background. However, an ethnic or cultural "match" between the therapist and the family may not be necessary. Awareness and understanding of local customs is more important. One therapist reported that families are more responsive to "local therapists" rather than someone hired from the mainland. Several respondents noted (particular those on the outer islands) that many of the native Hawaiian/Polynesian and some of the Asian cultures are very "small community-oriented." As noted earlier, families may be hesitant to open up to an outsider—and this remains a challenge for the MST therapists.

Two therapists noted that some families take a while to warm up and at the beginning of therapy, the therapist should not engage in activities that may "irritate the family." For example, the therapist might talk with the family outside for the first few visits rather than entering the house and not visit during meal times. It was also suggested that the therapist should adopt a humble stance and ask the family for help (rather than being too directive). Several therapists said that the families will tell you what they are willing to do during MST—but that the therapist has to be sensitive enough to listen. The interviewers concluded from these comments that effective therapists must be sensitive to their clients' backgrounds and expectations and transcend cultural and linguistic diversity, in order to be effective MST therapists.

SERVICE CAPACITY

Data provided by the MST Home-Based Coordinator shows that the MST teams are serving approximately two-thirds of their operational capacity. With the availability of more specific data between June, 2001 and November, 2001, the CSRG Evaluation Team was able to compare census and capacity across teams. As shown in Appendix B, variations are evident across the ten MST teams. For the past six months, East Hawaii team has been serving at or close to its capacity. West Hawaii has closed the gap since July 2001 and has met its capacity since September 2001. Leeward team has served over its capacity in the month of July 2001, experienced a drop in its enrollment between August and September, has reached a plateau since October, meeting two-thirds of its capacity. Although the West Honolulu team has experienced some turnovers for the past six months, its census remained rather stable, serving an average of 60% of its capacity. As to the Central Oahu team, after experiencing a drop in its enrollment between June and July, it had a stable census for the past four months. However, although Central Oahu's enrollment remained stable, its capacity has been increasing since July, resulting in a widening of the gap between its capacity and operational census. Windward was meeting less than 50% of its capacity in the months of June and July of 2001. Possibly due to a turnover of staff, Windward experienced a sharp drop in capacity in August. Since then, its enrollment has increased, reaching approximately 85% of its capacity in November. East Honolulu is meeting an average of 70% of its capacity, with a particular drop in enrollment and a corresponding increase in capacity in the month of August, 2001. For Central Maui, although its capacity has been stable for the past six months, it had a drop in enrollment in July and August of 2001. Since then, the census has slightly increased and is meeting close to 55% of its capacity. South Hawaii was meeting 50% of its capacity in June, 2001. However, it has been experiencing a constant decline in enrollment, meeting only about 6% of its capacity in October. Subsequently, its enrollment went up in November, with a 25% capacity. The Lahaina/Molokai/Lanai team was meeting slightly over 50% of its capacity in the months of June, July, and August. Since September, although its capacity has been consistently increasing, its enrollment has dropped. In November, it reached 25% of its capacity.

MST RESOURCES & EXPENDITURES

Obtaining information on the monetary resources expended on the MST home based teams proved to be challenging. The evaluation team worked across multiple data sources to put together as complete a picture as possible regarding the resources and expenditures associated with MST. However, the lack of a single, reliable and clean data source made this task difficult and limited the work in this area.

Table 6 presents information compiled from a variety of sources to report utilization and funding allocation for MST across the State and by location/team during the 2000-2001 Fiscal Year. It should be noted that the seven geographic categories roughly reflect the ten MST teams; however, some teams were combined due to limitations resulting from the use of information from three data sources. Ancillary costs beyond the budgeted amounts are not included. Statewide, the average annual cost, as reflected in the budgets, is $12,162 per child. There is considerable variation across sites in the average annual cost per child, ranging from a low of $8,090 for Windward Oahu site to a high of $19,707 at Maui.

Table 6: MST-Home Based Service Expenditures by Location/Team

Location/Team [a]	Number of Youth Served [b]	Average Annual MST Cost Per Youth [c]	Total Annual MST Budget [d]
Central, Oahu	28	$12,546	$351,280
Windward, Oahu	86	$ 8,090	$695,734
Leeward, Oahu	50	$ 9,030	$451,482
East HNL	34	$11,614	$394,882
West HNL	28	$12,986	$363,607
Maui	39	$19,707	$768,577
Hawaii	47	$14,293	$671,792
Total	312	$12,162	$3,697,354

Source: Various sources.
Note: Windward Oahu includes East Hawaii; Central Maui and Lahaina/Molokai/Lanai are combined; Hawaii includes West Hawaii and South Hawaii
[a] These geographic categories are based on categories used in by CAMHMIS.
[b] Number of Youth Served. Source: MST Program Database, DOH/CAMHD, FY 2001.
[c] Average Annual Cost Per Youth. Source: Derived by dividing the Total Annual Budget by Number of Youth Served, FY 2001.
[d] Total Annual Budget. Source: DOH/CAMHD Agency Contract Summary, FY 2001.

Data from CAMHMIS were analyzed to provide some comparative cost data. The costs in the CAMHMIS database for youth who received mental health services other than the MST home based teams are provided on a cost per service unit basis, allowing for a significantly more detailed examination of billing costs. Unfortunately, similar cost data for the MST youth is not available, requiring the CSRG Evaluation Team to rely on budgeted costs for the MST Home-Based teams as a comparison to billing costs for other youth receiving mental health services. The following contextual data, must, consequently, be interpreted with caution, as the costs are strictly not comparable.

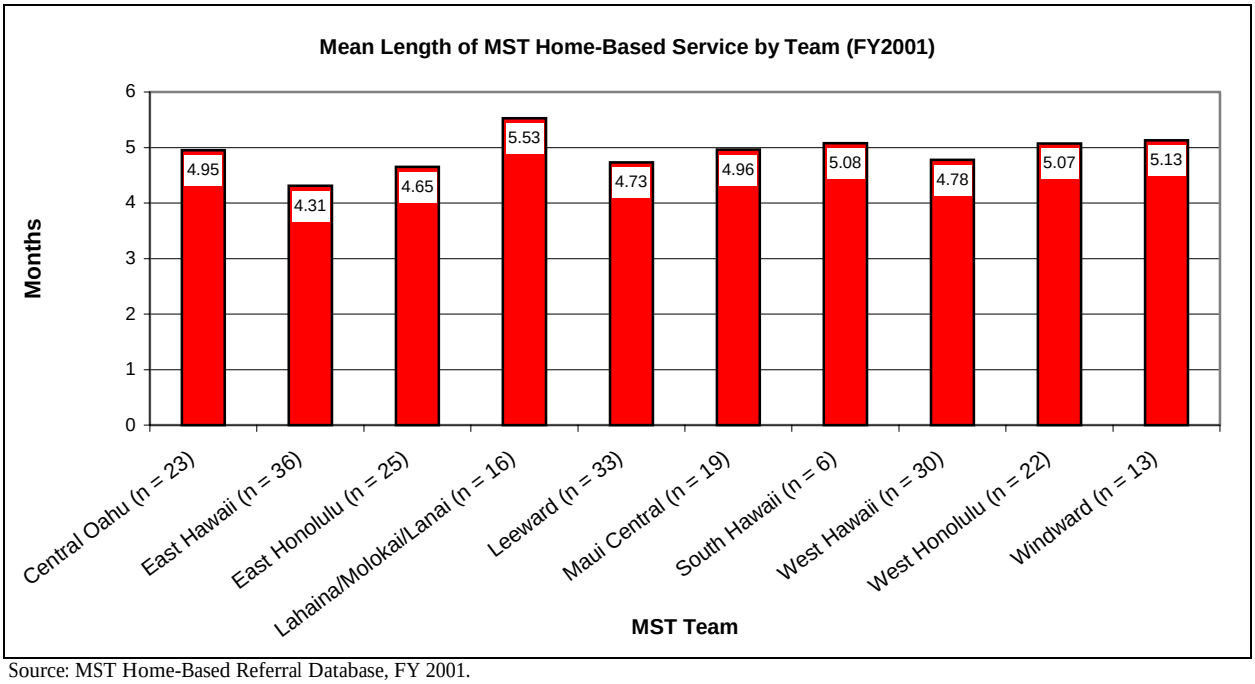
Nonetheless, some context for the budgeted amounts per child per year is possible from the CAMHMIS data. Overall, data were available for over 7,000 youth who received mental health services during FY2000-2001. Across all youth who received some type of mental health services, but did not receive any MST, the total average cost per child per year was $7,700. However, there were significant differences in the average annual cost per child by age, with youth under the age of 13 averaging $6,000 per child per year and youth age 15 or older averaging between $10,000 and $12,000 per child per year. As presented earlier, the youth who receive MST Home-Based services are older, with 87% of the youth aged 14 or older. Consequently, the range of budgeted costs (as presented in Table 6) for MST per child per year (from $8,090 to $19,707 with an overall average of $12,162) is roughly equivalent to the average cost of services provided by CAMHMIS for youth aged 14 and older who received other types of non-MST mental health services ($7,143 to $11,887). Again, it is important to note that the figures derived from the CAMHMIS database and the budgeted amounts provided by DOH/CAMHD for MST Home-Based teams are not strictly comparable. However, this comparison does indicate that the average annual cost per child served for MST is close to the average annual cost per child served of a comparable age who receive non-MST mental health services. In addition, it should be noted that MST is a more intensive service that really compares to more intensive services such as in-home or day treatment, where the costs are typically higher.

LENGTH OF MST TREATMENT

During FY2000-2001, the average length of time between the opening of a case to its closing was 135 days or 4.8 months (See Figure 4). These figures were derived from the MST Program Referral Database provided by the

MST Program within DOH/CAMHD and based on 223 cases that were open at some point during FY2000-2001 (i.e., cases were either closed, opened, or both during that time period). This amount of time falls within the range that the MST model prescribes is necessary for effective treatment (i.e., three to five months). Analyses indicted that the ten MST teams did not differ significantly on their average treatment length.

Figure 4: Length of MST Home-Based Service



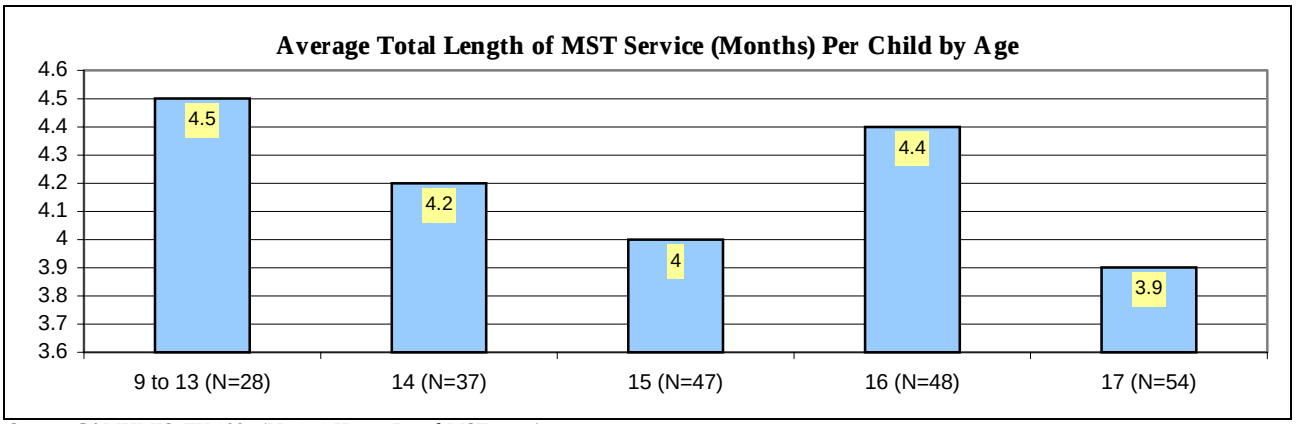
Source: MST Home-Based Referral Database, FY 2001.

DEMOGRAPHIC CHARACTERISTICS & SERVICE UTILIZATION OF MST HOME-BASED SERVICES

Data from CAMHMIS permitted an analysis of the utilization of MST Home-Based services by the characteristics of the children who received the services. Utilization is presented as the number of months a child received services during the 2000-2001 Fiscal Year. The results are presented according to age group, gender, and ethnicity. Fifteen ethnicity groups were collapsed into five categories: Pacific Islander (Hawaiian, Samoan, Micronesian), White, Asian (Chinese, Filipino, Japanese, Korean, Asian Other), Mixed, and Other (African American, Puerto Rican, Hispanic, Portuguese, Missing).

Overall, the average length of service in MST Home-Based programs was four and a half months. Length of service ranged from one to nine months. The differences in the average length of MST-home based services by demographic characteristics are extremely small. The males had a slightly longer average length of treatment (4.2 months) compared to the females (4.0 months). As indicated in the subsequent figure, there was some minor variation in the number of months service was provided by age. Youth under the age of 14 had the longest length of treatment, with a mean of 4.48 months, and youth ages 15 and 17 had average lengths of stay closer to 4 months.

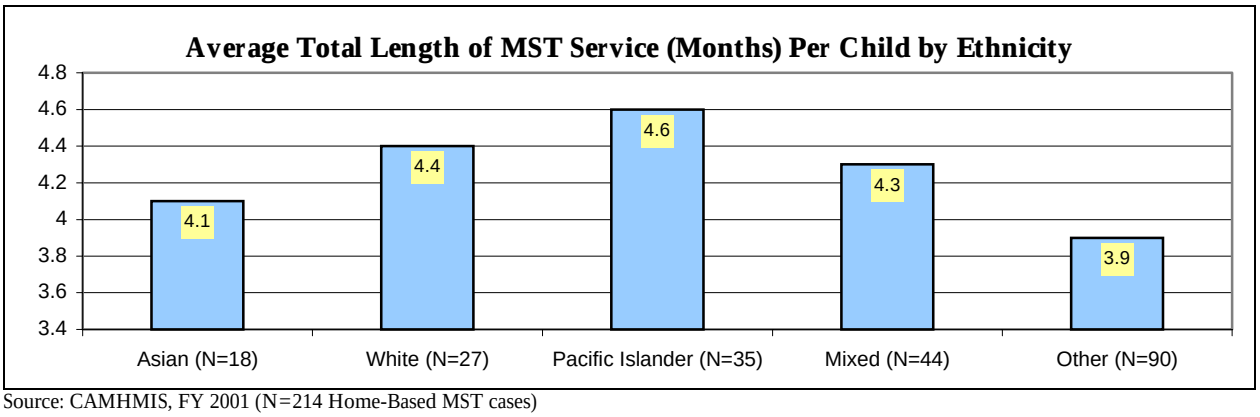
Figure 5: Total Length of MST Service Per Child by Age



Source: CAMHMIS, FY 2001 (N=214 Home-Based MST cases)

There was also some minor variation in length of treatment by ethnicity. Pacific Islanders had the longest average length of treatment (4.6), and with other and other Asians having the shortest (3.9 and 4.0 respectively). However, the differences are very small (on average about half a month). It should be noted that this finding is consistent with observations by therapists (i.e., children from families with Pacific Island heritage may require slightly longer treatments).

Figure 6: Total Length of MST Service Per Child by Ethnicity



Source: CAMHMIS, FY 2001 (N=214 Home-Based MST cases)

COORDINATION & SERVICE SYSTEMS: DOH/CAMHD, EDUCATION & JUVENILE JUSTICE

Therapists and supervisors were queried about the availability of ancillary and support services (e.g., referrals for family members) in their communities. Therapists and supervisors in urban/suburban areas indicated that they felt they had sufficient resources in their communities (e.g., anger management, marital therapy, therapy for depression, Narcotics Anonymous, Al-Anon) to efficiently deliver therapy. However, resources were more of a challenge in rural areas and outer islands, particularly for substance abuse support and mental health referrals for adult family members. Respondents also reported that the work they do using MST is generally positively regarded by personnel in other system (e.g., Education and Juvenile Justice). For example, MST staff reported that initially juvenile justice was skeptical of the effectiveness of MST with young offenders. However, many of them have

changed their minds about MST as they have begun seeing positive changes with those cases. Respondents reported that they generally have a good relationship with parole officers. Most of the children they serve have been involved with the law. Therapists noted that it is important to have the parole officer involved in MST as a team member in the child's ecology. Similarly, **all** children are involved with the education system.

> "There is teamwork between the DOE and DOH. There is no benefit to either as to who manages the case and provides the service." --- Supervisor

However, a number of respondents reported that there are problems with consistent policies and procedures that are not monitored within their own service system (DOH/CAMHD). In terms of policy, a number of respondents cited referral practices and reporting mechanisms and that there was not simply one "sticking point," but rather several places where the policy was derailed. They observed that there was a lack of alignment in the approaches of professionals within DOH/CAMHD (and thus, with DOE) and that this resulted in confusion for families. Respondents recommended that there should be more structure (i.e., clearly delineated roles and expectations for the functions associated with those roles), more top-down educational efforts and communication among DOH/CAMHD employees and other key stakeholders in the community (particularly when there are policy changes), and monitoring activities/mechanisms to ensure and maintain efficient policy implementation.

Several therapists listed all of the school-based personnel with whom they have regular contact over the course of MST therapy: administrators, student services coordinator, in-school therapist, school counselor, district school social worker, teacher, special education teachers. They noted that it is important for the MST therapist to have a relationship with all of the school-based personnel—as each has a unique and important influence on the child's life. Again, with a few exceptions, most respondents reported positive relations with school personnel.

Representatives from DOH/CAMHD and DOE produced a recent document entitled, "Interim Joint Practice Guidelines for the Provision of School Based Behavior/Mental Health (SBBH) Supports and Services." This practice document states that DOE's SBBH program in partnership with the DOH/CAMHD system of service delivery will provide a comprehensive array of supports to meet the needs of all identified students, from those requiring minimal interventions through those with highly intensive and complex behavior support requirements. These are certainly early indications of efforts from both systems to form joint policies that may lead towards a more comprehensive and seamless statewide service system for children and their families who are in need of mental health services.

As of July 1, 2001, the Hawaii Department of Education (DOE) began providing mental health services for cases termed "low end" through the newly expanded School-Based Behavioral Health (SBBH) program. However, there are some concerns among supervisors and therapists about the potential impact associated with this shift.

- There is a shortage of special education teachers and other mental health professionals—and it is unclear how the DOE will provide these needed specialized services.
- Teams are concerned that MST referrals may plummet if needs can be met within the education system.
- If children with conduct disorders and antisocial personalities who are disruptive in school are decertified (i.e., no longer considered special education) and not

receiving needed mental health services—this may lead to higher drop-out rates and poorer outcomes.

- If disruptive students go to residential care, decide to pursue a GED, or are home-schooled, they are no longer in the education system and would not get referred for MST and receive needed services.

Representatives from the juvenile justice system noted some "built-in tension" between service systems. Even though the court is serving the toughest cases, it has to depend on the executive branch (e.g., DOH/CAMHD, DHS, DOE) to provide services for the youth. Furthermore, the juvenile justice system takes a perspective that is different from those of DOH/CAMHD and DOE. Whereas DOH/CAMHD and DOE focus on the systemic issues pertaining to service provision (such as whether a certain MST team is meeting the capacity whereas another one is not), the judge is interested in ordering the most appropriate services to the particular youth who is appearing in court. Moreover, whereas DOE and DOH/CAMHD are interested in meeting the educational and mental health needs of the youth, the court system emphasizes the criminal issues that are at hand.

"Although all systems respect each other, we are trying to understand each other's complexities." ---Juvenile Justice Representative

Juvenile justice respondents perceived that a "shallow pool" of resources and services are available across the systems. For example, if a certain type of service requires more resources, those resources have to be taken away from some place else. Currently, all the juvenile justice programs, such as the juvenile drug court and the family drug court, rely on "soft money" (e.g., contracts, federal government, juvenile justice grants, money from the attorney general's office).

The juvenile justice interviewee emphasized that MST should not be seen as "the silver bullet for all high-end kids" because not all youth and their ecologies are conducive to the MST treatment model. For example, (and as therapists noted earlier) families may not have the cognitive and behavioral capability to execute the skills that are taught to them by the therapist. Furthermore, in the course of treating the youth, other family members may need services. Thus, the respondent emphasized that systems must be flexible and services must be readily available for their access and utilization. Instead of placing unreasonably high expectations on MST to "cure" all high-end youth, more systematic criteria and methods must be in place to identify youth who are appropriate for MST services.

In addition to providing effective services to the high-end youth, both education and juvenile justice respondents explicitly emphasized that it is as important to provide early intervention to the low-end kids. Early detection and targeting of problem behaviors is crucial in the prevention of more serious problems. Due to this two-pronged need, the systems are strained to provide adequate resources to a large high-end population, as well as to provide care and prevention to the even larger population of low-end youth.

"You pay now, or you pay later." ---Therapist

OUTCOMES OF MST HOME-BASED SERVICES

The success of MST is determined through measurable goals. At the beginning of treatment, overarching goals are articulated by the therapist, family, and other stakeholders in the child's life. At the end of MST, the therapist, parents, and other people in the child's ecology evaluate the success of the therapy. If all four overarching goals have been achieved, MST is deemed successful. If three of

the four overarching goals were reached, MST is viewed as a partial success. If two or fewer goals are achieved, MST has failed.

The MST therapist and family work together to articulate reasonable, attainable goals. Some therapists noted that other therapies focus on idealized goals (e.g., perfect attendance, extinct problem behaviors) that may be short-lived while MST focuses on long-term, sustainable improvements rather than perfection. For example, several therapists explained that MST may not eliminate crises in the family; however, subsequent crises will be less frequent and more manageable (within the family).

"MST empowers parents over the short-term and who will save the state money by helping their own kids in the long-term." ---Therapist

Each week, the therapist sets new intermediary goals with the family and other relevant folks in the child's ecology. On a weekly basis, throughout the course of MST therapy, therapists and parents review their success on achieving intermediary goals and the maintenance and sustainability of those goals. This ongoing feedback and monitoring mechanism is viewed as "day-to-day" accountability by the therapists. See Table 7 for examples of intermediary goals (IGs) and overarching goals.

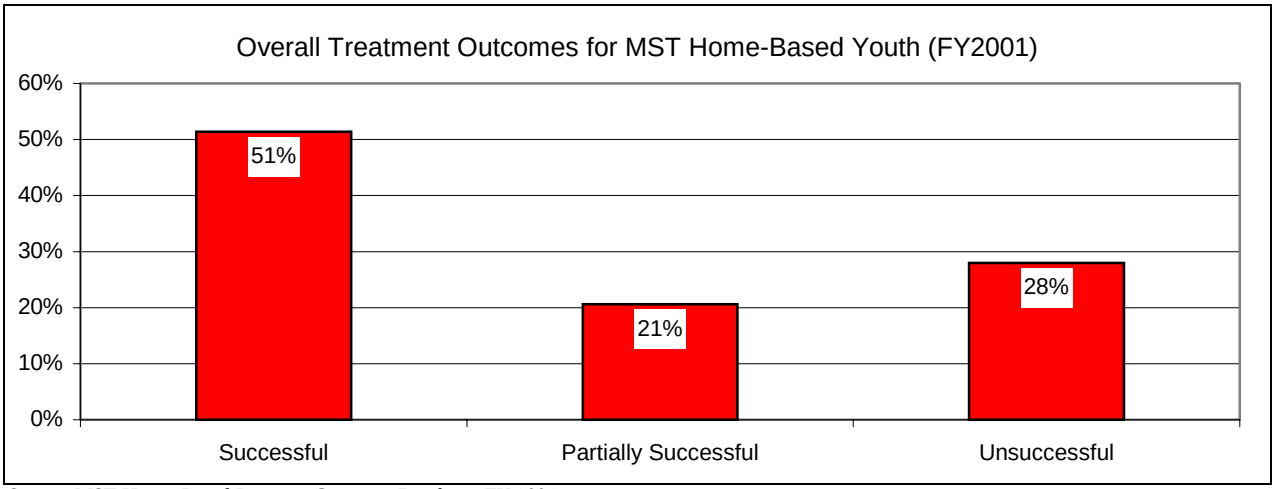
"MST therapists are under a lot of pressure to show results in four months. They are held accountable—and this is appropriate." --- Therapist

Table 7: Examples of Intermediary and Overarching Goals Articulated in MST Services

Intermediary Goals (~5-10/week)	Overarching Goals (~4 for 3-5months)
• Help grandmother introduce a token economy • Plan for IEP meetings • Assist mother to make appt. with doctor • Modify behavior plans • Increase rewards for positive behaviors	• Eliminate substance abuse/Remain drug free • Reduce truancy/Increase school attendance • Stop child from running away • Eliminate criminal behavior • Increase compliance (with rules at home) • Increase communication

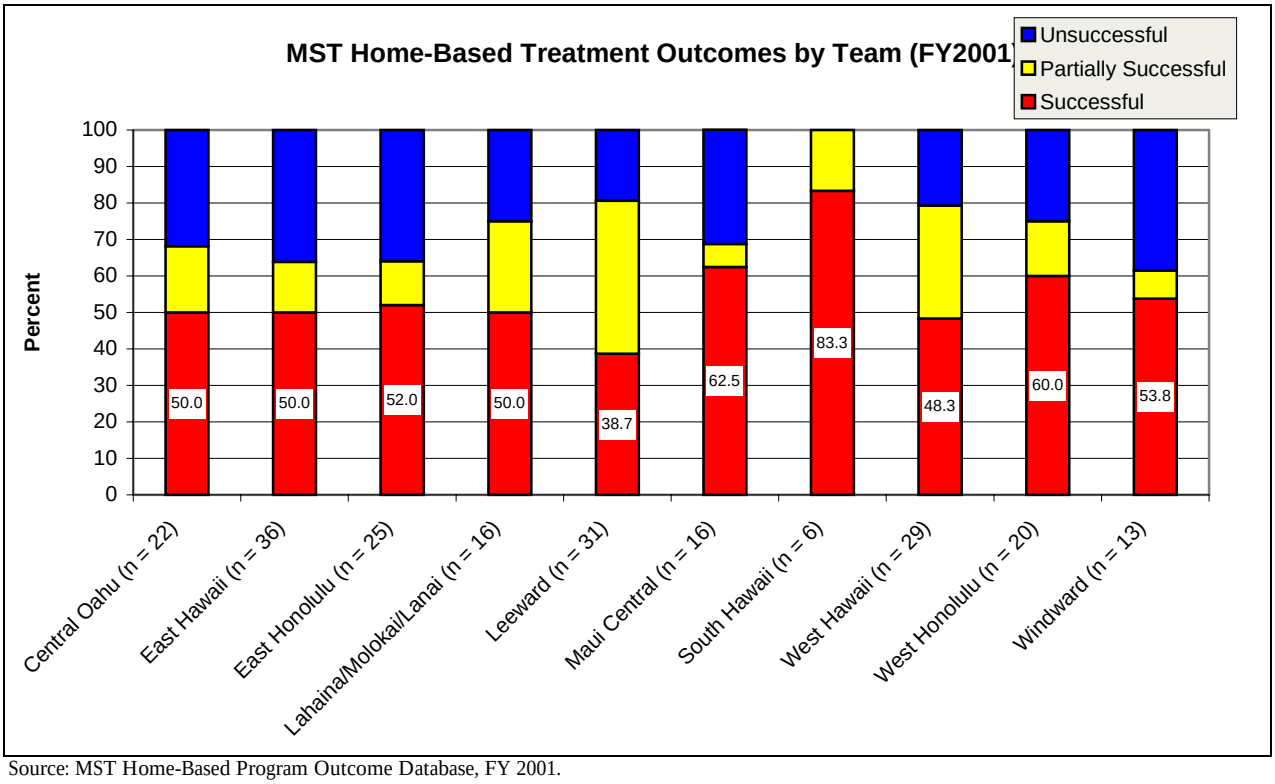
Based on the MST program Outcome database, 51% of the 214 youths successfully met the all four overarching goals for MST, 21% had partial success (3 out of 4 overarching goals), and 28% met less than three of the goals. Across various MST teams, West Hawaii, Leeward, and South Hawaii exceeded the average success/partial success rate; Central Oahu, Maui Central, Lahaina/Molokai/Lanai, and West Honolulu were within the average range; Windward, East Hawaii, and East Honolulu fell below the average (See Figures 7 & 8). In addition to the overall outcomes, 64% (85/132) youth (for whom follow-up data were available) were participating in organized community activities at the end of MST Home-Based services (See Figure 9).

Figure 7: Overall Treatment Outcomes for MST Home-Based Youth



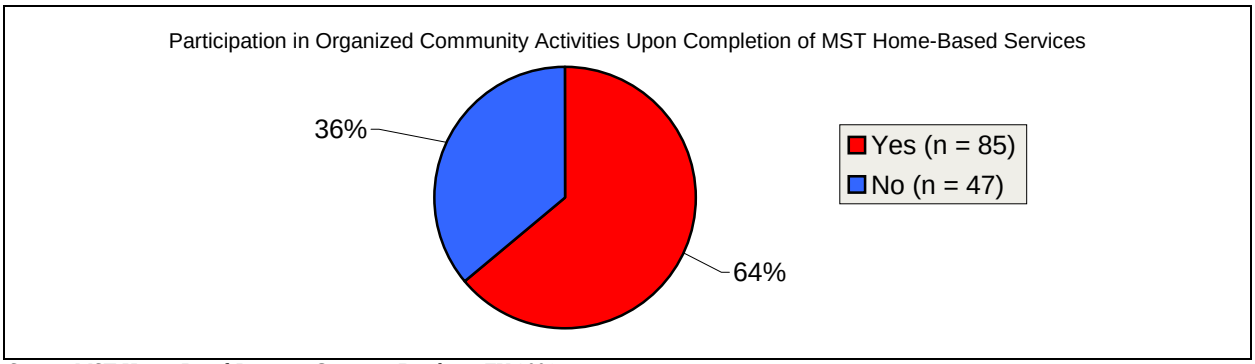
Source: MST Home-Based Program Outcome Database, FY 2001.

Figure 8: Treatment Outcomes for MST Home-Based Youth by Team



Source: MST Home-Based Program Outcome Database, FY 2001.

Figure 9: Community Participation After Completion of MST Home-Based Services



Source: MST Home-Based Program Outcome Database, FY 2001.

Note: Data were unavailable for 94 youth.

MST therapists and supervisors agreed that MST can be effective with many families (but not all) that have children with conduct disorders and other related mental health problems. Several therapists noted that even non-completers and unsuccessful cases typically show long-term improvements. Some therapists observed that when MST is successful it is because of what the therapists and the families do. On paper it is just a model. However, the MST model sets the stage for the families and the therapists to achieve successful outcomes.

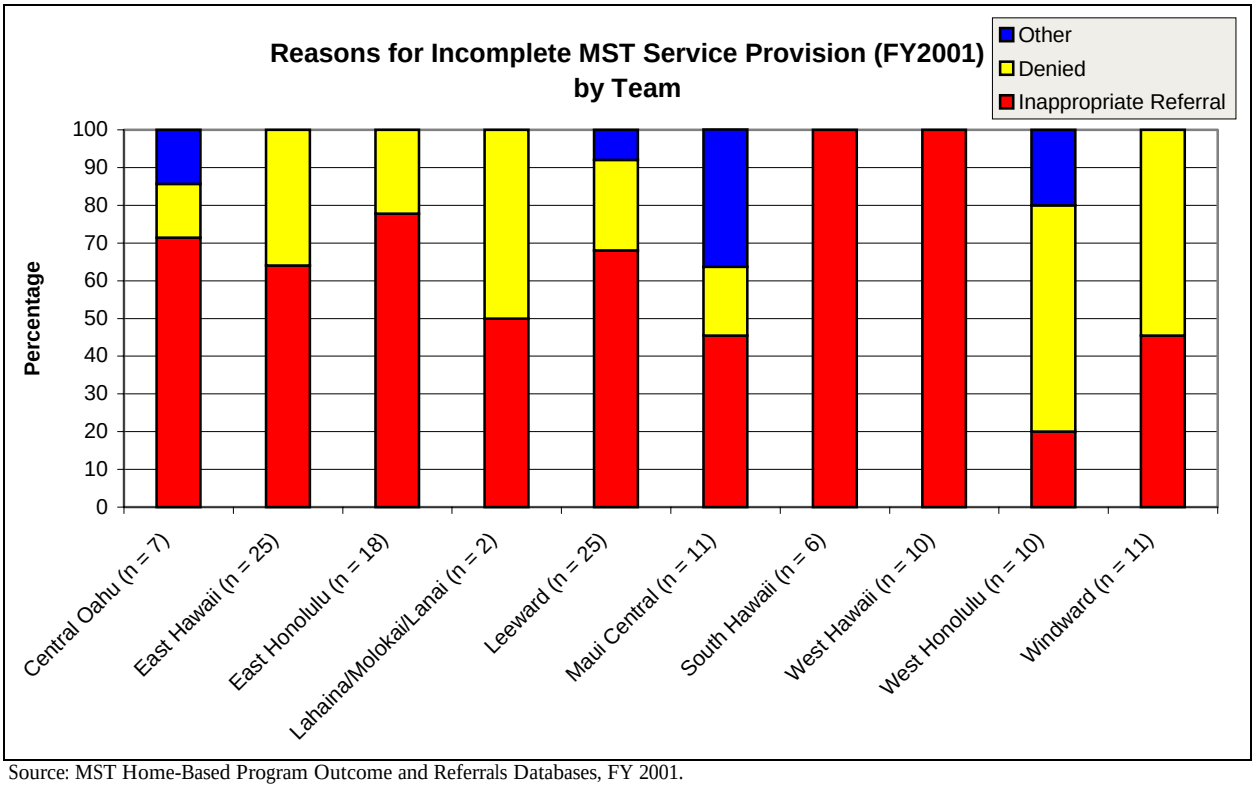
"I know I am successful when I see hope return to a family." ---Therapist

At the end of therapy, MST therapists make recommendations on follow-up. During the last month of MST, the therapist works on transition activities with the family. Once MST is completed, the model states that there should be no need for other services and most families do not require step-down services or formal supports. However, because the relationship with the school is typically enhanced and school personnel are familiar with the family's concerns, goals and changes, low-level supportive services are typically available through the school.

Some respondents felt that there may be a need for step-down services, but not in the traditional sense of individual therapy. Unfortunately, traditional therapy may confound MST efforts and lead the children and families to return to old patterns. However, some therapists and supervisors felt that parents may need periodic "boosters" for ongoing support and maintenance. In addition, some respondents observed that the long-term or follow-up outcomes have a child-focus. Several therapists and supervisors felt that this was insufficient and not aligned with the goals and changes achieved with MST. That is, many felt that family- or system-focused outcomes should be added for monitoring.

This evaluation report has presented data on referrals and treatment decisions (see Figure 3) and treatment outcomes for children and youth who completed MST treatment (See Figure 7). It is also important to understand the outcomes for children and youth who were referred for MST Home-Based services, but did not complete their course of treatment. Of the 125 youth who were referred but did not complete MST services during FY2001 (and were not classified as unsuccessful cases), 65% were deemed inappropriate referrals, 28% were ultimately denied MST services because they did not meet the criteria for MST Home-Based (e.g., too young, inappropriate diagnosis, sex offender, no "family-like" home) or referring to other services (e.g., residential treatment, therapeutic foster home), and 7% had other reasons for incompletion (e.g., moving to different island) (See Figure 10.)

Figure 10: Reasons for Youth's Incompletion of MST Home-Based Services



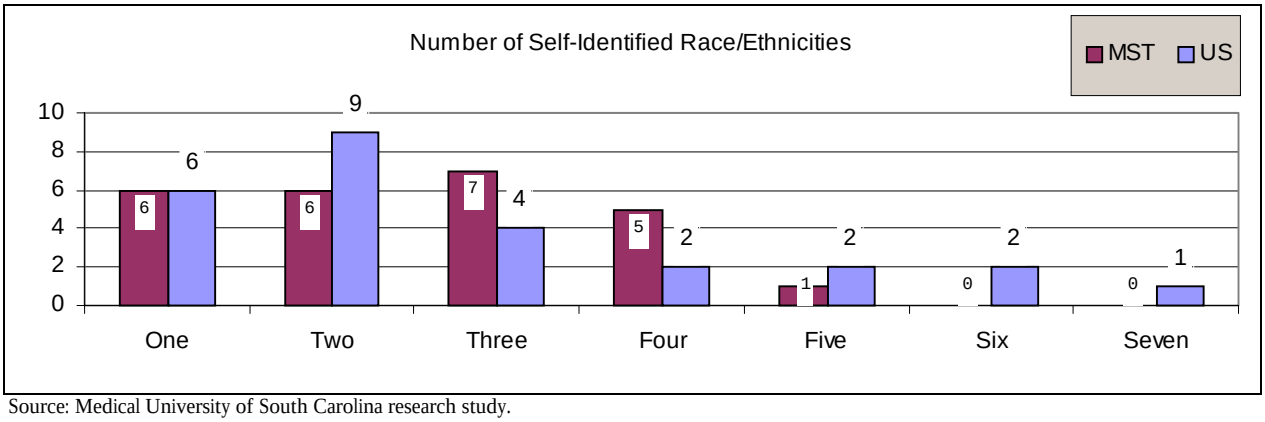
Source: MST Home-Based Program Outcome and Referrals Databases, FY 2001.

THE CONTINUUM OF CARE

Results from the MST-based Continuum of Care are presented separately in an attempt to avoid further confusion regarding the MST Continuum of Care and the MST Home-Based programs. **This section of the report presents findings for the Continuum of Care only. The data do not pertain to youth served by the MST Home-Based teams.** The MST Continuum of Care was designed to address two limitations that have been observed in the ability of MST Home-Based programs to achieve favorable clinical outcomes: many families still require treatment after 3-5 months, and programs do not have the capacity to retain continuity of care when youths receive out-of-home (and community) placements, for safety reasons, in secure settings. Thus, the MST Continuum of Care provides a greater range of intensive services with no time limitations and has the same MST staff controlling clinical decisions in all placement settings. The MST Continuum of Care was conducted as a randomized trial, with 25 children and adolescents randomly assigned to receive Continuum Services and 26 randomly assigned to receive the usual services provided through DOH/CAMHD. Usual services (US) included the range of outpatient, crisis, assessment, day treatment, and residential services available through the Hawaii public mental health system.

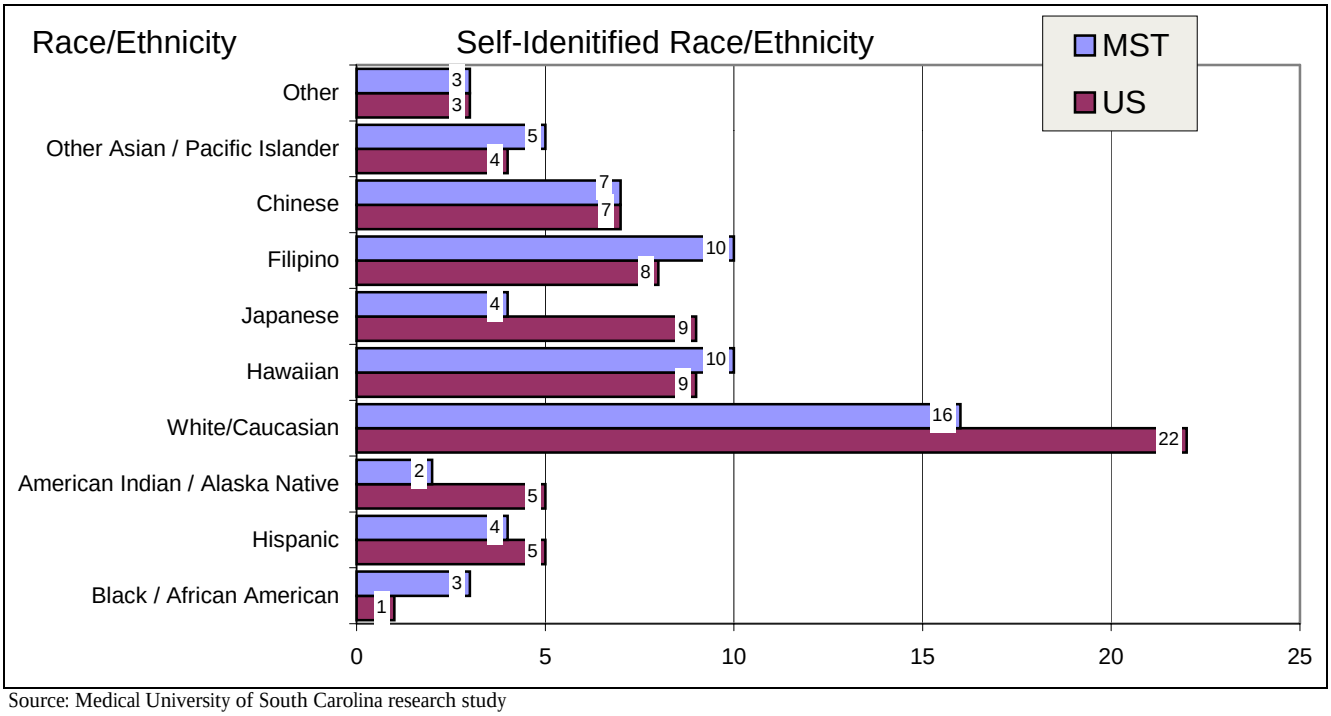
There were 15 (60.0%) boys and ten (40.0%) girls in the MST group, with 12 (46.2%) boys and 14 (53.8%) girls in the US group. Participants were allowed to indicate that they were members of more than one ethnic/racial group. Nearly all children self-identified as multiracial/multiethnic with only six in each treatment group noting that they were members of only one racial/ethnic group. Overall, 35 unique combinations of race/ethnicity selected by participants. Figures 11 and 12 summarize the data regarding ethnicity of the youth served across the Continuum of Care and usual services.

Figure 11: Ethnicity Across Youth Served in Continuum of Care and Usual Services



Source: Medical University of South Carolina research study.

Figure 12:Self-Identified Race / Ethnicity Across Youth Served in the Continuum of Care and Usual Services



Source: Medical University of South Carolina research study

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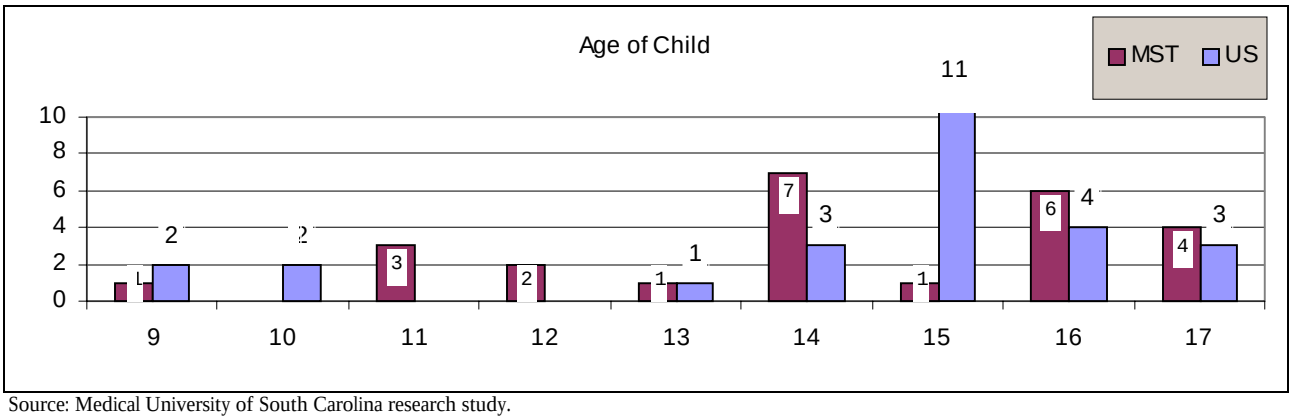
Upon enrollment, the mean age of the Continuum of Care group was 14.24 and the mean age of the usual services group was 14.35. As would be expected with a random assignment process, there was no statistical difference associated with age (See Figure 13).

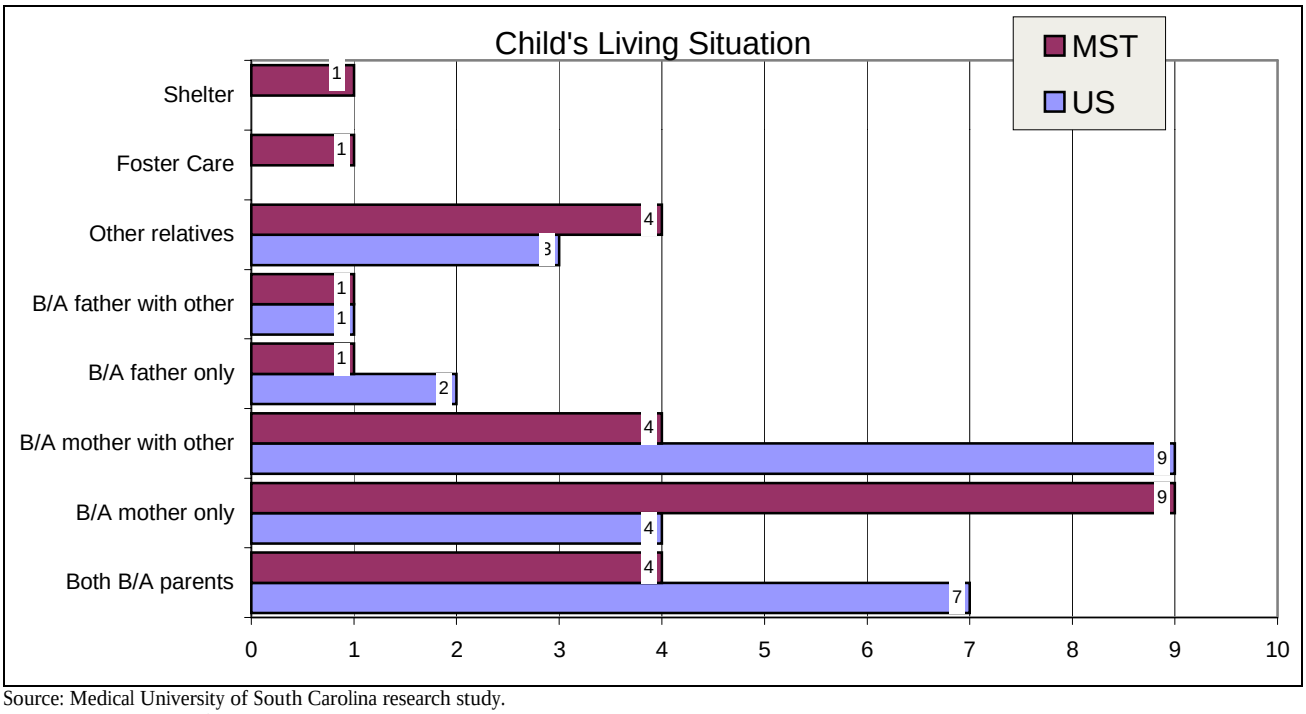
Figure 13: Mean Age of Continuum of Care and Usual Services Youth



Source: Medical University of South Carolina research study.

Most children in both treatment groups had primary caregivers who were female, with 12 (80.0%) in the Continuum of Care group and 14 (87.5%) in the usual services group. Most children were living at home with one or both of their parents. As Figure 14 indicates, only two youth were in shelter or foster care settings.

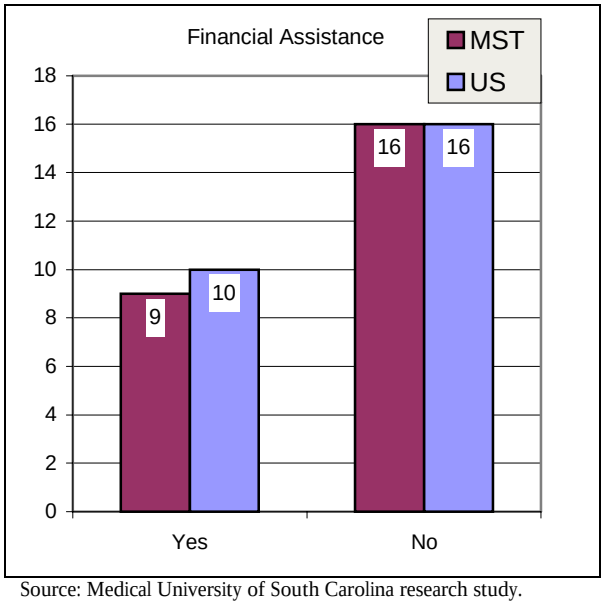
Figure 14: Living Situation of Youth in MST and US



Source: Medical University of South Carolina research study.
Note: Respondents can fall within more than one race/ethnicity category.

Slightly over 60% of the youth served by the continuum did not receive financial assistance. The Continuum of Care and usual services groups were virtually identical on this variable. See Figure 15 for the proportion of youth in each group whose families received financial assistance.

Figure 15:Youth Whose Families Received Financial Assistance in Continuum and US Groups



Source: Medical University of South Carolina research study.

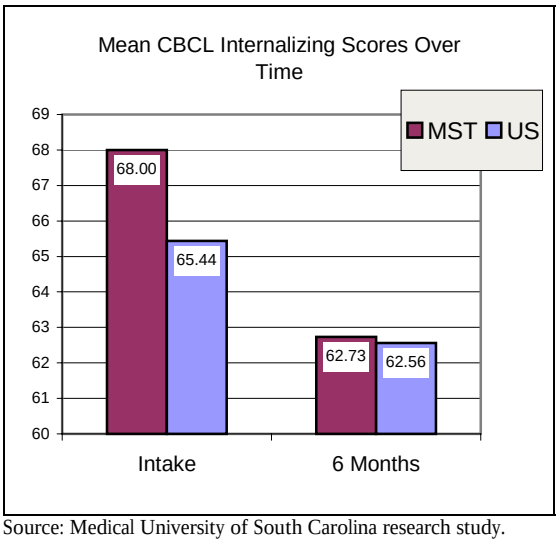
MST CONTINUUM OF CARE OUTCOMES

This section of the report focuses on the outcomes that are available from the Continuum of Care study. The data were obtained from MUSC and were analyzed independently by the UCSF evaluation staff. **It is essential to note that the MST Continuum of Care in Hawaii was terminated before sufficient data could be collected that would permit a reliable and meaningful analysis of outcome. The data reported here must be interpreted as trends that do not in any way generalize to other youth who would have been served by the MST based continuum either in Hawaii or elsewhere.** The data do tell the story of the youth who were actually served in the Continuum of Care, however it is impossible to predict what final results would have emerged from the study once sufficient numbers of youth had been enrolled. The outcomes presented in this report focus on several key indicators of clinical and functional status.

ACHENBACH'S CHILD BEHAVIOR CHECKLIST

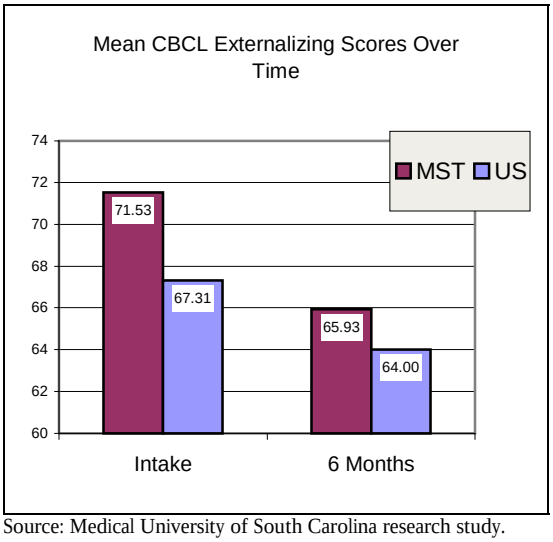
A parent completed the Achenbach Child Behavior Checklist (CBCL) at intake and after six months of treatment for 15 children in the MST group and 16 children in the usual services group. The CBCL is a widely-used diagnostic and research measure designed to provide a standardized measure of symptoms and behavioral and emotional problems among children ages four through 18 years. In addition to a total problem score and eight narrow-band syndrome scores, the CBCL provides two broadband syndrome scores (i.e., externalizing and internalizing) that are most widely utilized. It should be noted that higher scores indicate greater impairment. From intake to six months, CBCL internalizing scores fell 5.27 points for the MST group and 2.88 points for the usual services group. Externalizing scores fell 5.60 points for the MST group and 3.31 points for the usual services group. None of these differences are statistically significant and this may be due, in part, to a small sample size. While children in both groups made improvements in internalizing and externalizing symptoms as observed by parents, the MST group was more impaired at intake and made greater gains through the six-month course of treatment than the usual services group. See Figures 16 and 17 for CBCL Internalizing and Externalizing Scores by group.

Figure 16: Mean CBCL Internalizing Score



Source: Medical University of South Carolina research study.

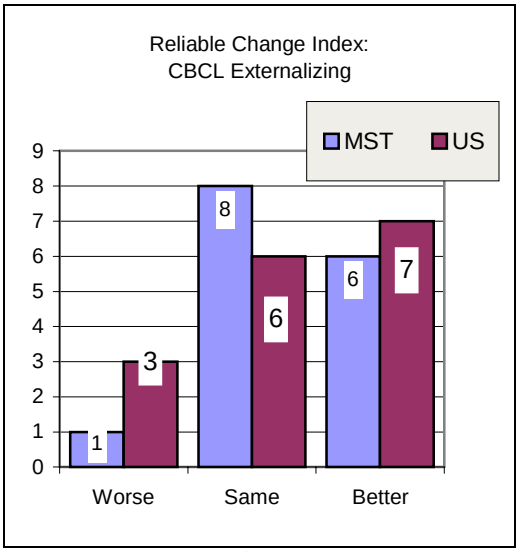
Figure 17: Mean CBCL Externalizing Score



Source: Medical University of South Carolina research study.

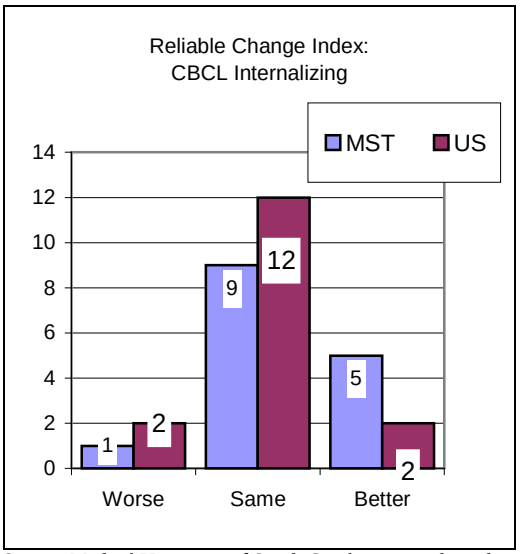
Because changes in CBCL scores or any other standard measure can be difficult to interpret and understand, we converted the results to provide information on the number of youth showing positive change, no change, and negative change using the Reliable Change Index. The Reliable Change Index (RCI) provides a basis for classifying individual cases as having changed in a statistically reliable sense. The index allows for an accounting of the error of measurement when analyzing change over time. Reliable change is reported when the magnitude of change sufficiently exceeds the random fluctuation associated with measurement error. The RCI does not, by itself, provide information regarding the clinical significance of change. The figures below provide the results of these analyses. Again, the numbers and differences are small. However, on both the CBCL externalizing and internalizing scales, more youth showed improvement in the MST condition (See Figures 18 and 19).

Figure 18: RCI Index CBCL Eternalizing Score



Source: Medical University of South Carolina research study.

Figure 19: RCI Index CBCL Internalizing



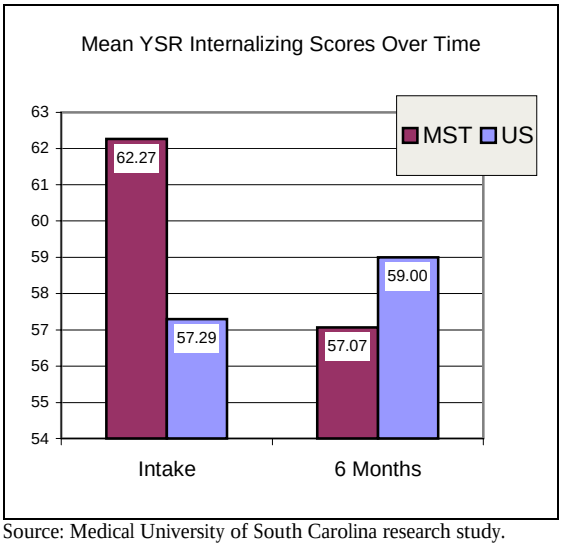
Source: Medical University of South Carolina research study.

ACHENBACH'S YOUTH-SELF REPORT (YSR)

Each child also completed the Achenbach Youth Self-Report (YSR) at intake and after six months of treatment. This instrument was completed by a total of 30 children, with 15 children in each group. The YSR is similar in nature and scope to the CBCL. It was designed to be used with children ages 11 through 18 years who have at least fifth grade reading skills. Adults are able to help children with poor reading skills understand the meaning of items on the YSR. The YSR is a widely used diagnostic and research measure designed to provide a standardized measure of self-reported feelings and behaviors that may be symptoms of behavioral and emotional problems among children ages four through 18 years. Like the CBCL, the YSR provides two broadband syndrome scores (i.e., externalizing and internalizing). It should be noted that higher scores indicate greater impairment. From intake to six months, YSR internalizing scores fell 5.20 points for the MST group and increased by 1.71 points for the usual services group. Externalizing scores fell 6.27 points for the MST group and 0.36 points for the usual services group. The difference in change over time between the MST and usual services groups are meaningful, but not statistically significant for the internalizing scale. The difference in change between the two groups is significant ($p < .05$) on externalizing scale. The MST group was more impaired at intake and made meaningful gains through the six-month course of treatment, while the usual services group exhibited little change in symptoms on either scale.

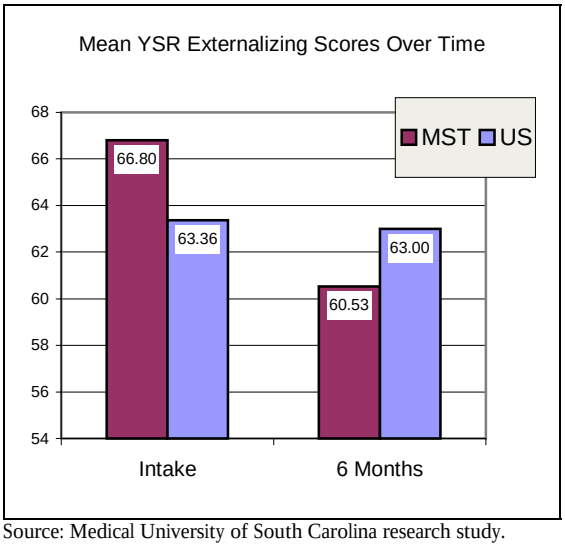
Although the YSR does not provide diagnoses, it is an important tool for gauging changes in the severity of symptoms and can be used to identify children who are presenting symptoms in a clinical or borderline range in these two areas. Like the CBCL, on both the internalizing and externalizing scales, children scoring at 64 or higher fall into the clinical range while children whose scores extend from 60 to 63 fall into the borderline range (See Figures 20 and 21).

Figure 20: Mean YSR Internalizing Score



Source: Medical University of South Carolina research study.

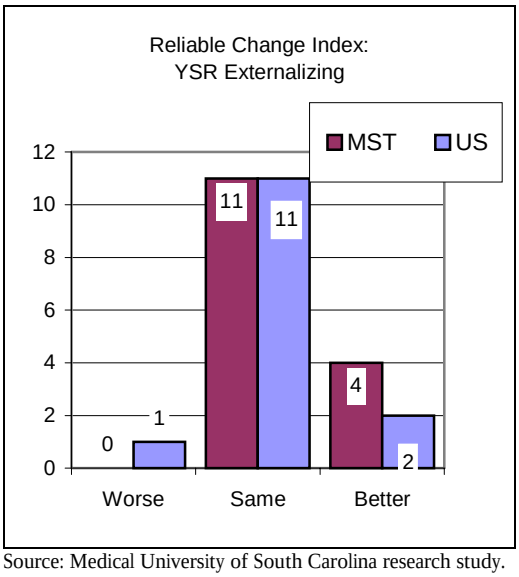
Figure 21: Mean YSR Externalizing Score



Source: Medical University of South Carolina research study.

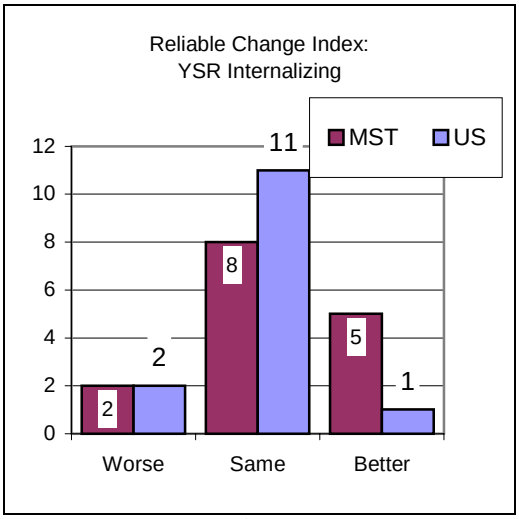
Figures 22 and 23 show how children in both groups were classified according to the Reliable Change Index (RCI) at intake and after six months of treatment. Again, more youth in the MST condition showed improvement than in the usual services group.

Figure 22: RCI Index YSR Externalizing



Source: Medical University of South Carolina research study.

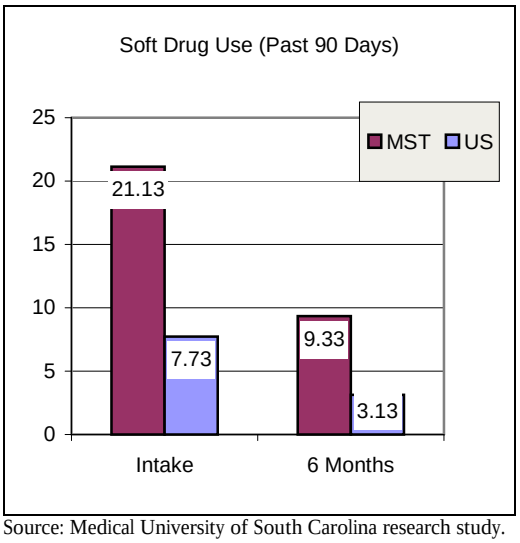
igure 23: RCI Index YSR Internalizing



Source: Medical University of South Carolina research study.

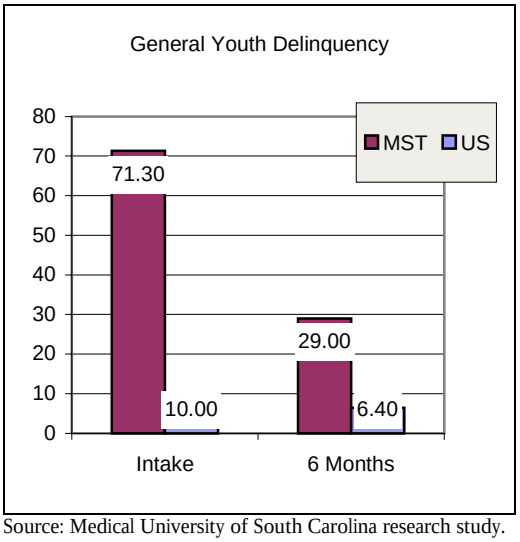
Finally, as illustrated in Figures 24 and 25, there were no significant findings regarding soft drug use, and youth delinquency.

Figure 24: Soft Drug Use



Source: Medical University of South Carolina research study.

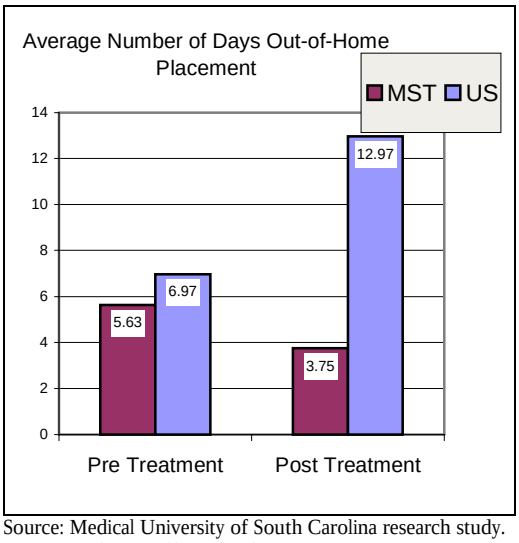
Figure 25: General Youth Delinquency



Source: Medical University of South Carolina research study.

However, in terms of the average number of days in out-of-home placement MST is much smaller for the MST group (post-treatment) than for the US group and the differences are statistically significant, $p < .05$ (See Figure 26).

Figure 26: Average Number of Days in Out-of-Home Placement



Source: Medical University of South Carolina research study.
Note: Significant difference of treatment $p<.05$.

SUMMARY OF KEY FINDINGS

The key findings from this report are summarized below. The findings derive from multiple data sources and also from the experience of conducting the evaluation. Not all the results can be summarized. A special emphasis is placed on those results that appear particularly strong or noteworthy. The findings are grouped by the topics addressed in the report.

MST HOME-BASED CASE DEMOGRAPHICS AND CHARACTERISTICS

- The youth served in MST Home-Based services are predominantly male (70%) adolescents (87% over the age of 13) from a wide range of ethnic backgrounds (87% non-Anglo). The most common diagnosis is conduct or oppositional defiant disorder (38%), followed by ADHD (24%) and Anxiety, PTSD, Affective or Thought Disorders. About one third (30%) have a history of substance abuse and about one fifth (21%) have had residential treatment.

- The diagnostic, age and gender profiles are generally consonant with the youth who have received MST services in other settings and in prior studies. The ethnic diversity is, however, unique to the State of Hawaii.

REFERRAL PROCESS FOR MST HOME-BASED

- Referral decisions for MST are made on an average of three and one half days after the initial referral. The vast majority of the referrals are approved (88%).

- MST Teams report that children exhibiting willful misconduct are the target group for MST services. They report that a significant proportion of the children have "been receiving services for years" and are considered "difficult".

- Though the referral process appears well developed and ensures that teams do not refuse "difficult" cases, there is room for improvement. Problems were reported in having complete information in the referral file, delays on the part of the care coordinators in turning around information, and in getting enough referrals to meet capacity.

- A number of reasons were cited for the lack of sufficient referrals at some sites: Some care coordinators do not know enough about MST; some care coordinators do not believe in the MST model, some referrals are made on the basis of personal contacts and experience.

- In a theme that will appear elsewhere among the findings, a number of therapists stated that many care coordinators and members of the public (including MST recipients) do not understand the distinction between MST Home-Based Services and the MST Continuum. Many felt "Bad Press" on the Continuum has hampered their capacity to delivery MST Home-Based services.

- A range of efforts was described to address problems in the referral process, including new clinical standards, and education of care coordinators.

STAFFING

- The background education and training of MST therapists is varied, ranging from Bachelors to Masters Degrees. About half of the therapists had clinical training or experience.

- MST therapists generally found the work more satisfying than prior experiences (such as intensive Home-Based services). They especially noted satisfaction with team structures and supervision.

- Staffing and retention have clearly posed challenges. The human resource pool from which to select MST therapists is not large in Hawaii. Some potential staff heard "bad" things about MST related to the press regarding the Continuum. More importantly, the theoretical orientation of MST proved challenging to many experienced therapists. The switch from a child centered to a family-centered model was cited as a key challenge.

TRAINING, SUPERVISION AND CONSULTATION

- MST therapists were uniformly enthusiastic about their training experience. Semi-annual trainings are offered as well as on-site booster trainings. All therapists interviewed could discuss extensively the key tenants and implications for treatment of the MST model.

- Supervision of the MST therapists is extensive, and therapists unanimously praised the supervision process. Most therapists reported that supervision was much more intensive than in other types of therapy and was extremely helpful.

- Therapists were extraordinarily enthusiastic about the consultation they were receiving from the MST consultant working out of South Carolina. Some therapists did, however, suggest that a local MST consultant would be helpful and could respond more immediately as well as provide more face-to-face contact and knowledge of Hawaii concerns.

- Feedback was mixed with regard to the Therapist Adherence Measure (TAM) used to assess adherence to the model. Several therapists and supervisors felt the TAM was problematic and confusing, not allowing for clarification of responses. Use of the TAM also varies across teams. In some cases it is infrequently used for feedback, in others it is used more extensively.

- There is extensive therapist and supervisor and development plans in many MST Home-Based services teams.

IMPLEMENTATION OF MST IN HAWAII

- Most respondents felt that both the MST Home-Based and Continuum were poorly introduced to Hawaii. Problems included: The "overselling" of MST as the only useful type of therapy, the impression that MST would be able to "save" all children, and the introduction of the MST Continuum, which added to the confusion regarding the MST Home-Based programs.

- Therapists felt that progress was being made in salvaging the reputation of MST in Hawaii following the mistakes in how it was introduced, but that there remained lingering negative aftereffects.

MST SERVICE DELIVERY

- Therapists seemed to have fully embraced the MST service delivery model. They felt that MST provided them with practical tools that allowed them to work intensively with families to achieve goals. Clearly, adopting MST proved a challenge for most therapists, but uniformly the therapists felt the model enhanced their capacity to help families and children function more independently. MST as

described by the therapists is an intensive process that nonetheless discourages dependence on the service system.

CULTURAL SENSITIVITY

- MST Home-Based Therapists in Hawaii had clearly adapted the MST model to the unique cultural context found in Hawaii. One supervisor, for example, reported that the directive nature of MST could be offensive to families with Asian or Pacific Islander/Polynesian heritage, requiring some explanation to families regarding why the model is directive. Another therapist felt an additional month or two of service delivery beyond the usual MST time frame would help the therapist take the necessary time to develop rapport with the family.

MST SERVICE CAPACITY, UTILIZATION, AND EXPENDITURES

- MST teams are serving approximately two-thirds of their capacity overall. There is variation between teams with some teams operating at capacity and others operating as low as 50% of capacity depending on the month.

- Information on the monetary resources associated with MST Home-Based teams was difficult to obtain. There was a lack of a single, reliable, clean data source which severely limited work in this area.

- Using available data, it was determined that the budgeted cost for the MST teams averaged $12,162 per child served for the 2000-2001 fiscal year. The amounts varied by location, ranging from $8,000 to $14,000 per child served.

- The average amount of budgeted resources per child during the 2000-2001 FY for MST Home-Based teams was similar to the dollars per child amounts reported in a statewide information system on similar age youth who received other, non-MST mental health services.

- The average length of time between the opening of an MST family and closing is 4.82 months across all teams. There was some minor variation across teams. Length of services did not differ significantly by demographic characteristics.

COORDINATION AND SERVICE SYSTEMS

- Most therapists reported positive working relationships with school personnel. A number of respondents, however, expressed frustration with a lack of consistent policies and procedures within DOH/CAMHD and observed that DOH/CAMHD and the Department of Education do not appear aligned in their approaches.

- MST staff reported initial skepticism regarding MST from juvenile justice, though it has now changed.

MST HOME-BASED OUTCOMES

- Although data on standard measures of functional status are obtained for youth who receive MST Home-Based services, the evaluation team was not able to confidently use the data because of definitional problems and missing data. Instead, we relied on self-reported outcomes that specified 51% of the youth were successful in meeting all of their overarching treatment goals. These outcomes varied by team, with success reported as ranging from 38% to 83%. In addition, the treatment of 21% of youths served were reported as partial successes (i.e., three of four overarching treatment goals were achieved).

MST CONTINUUM OF CARE

- The MST based continuum of care was terminated before sufficient data could be collected that would permit a reliable and meaningful analysis of outcome that could be generalized to youth beyond those who actually received services. For those youth who did receive services, there was a consistent, though statistically not significant, improvement in clinical and functional status for youth in the MST Continuum compared to youth who received usual services. The sample size, however, is too small to allow for any definitive conclusions.

RECOMMENDATIONS

In making our recommendations, we have attempted to draw from our existing findings as well as the experience of conducting the evaluation. As specified earlier, the time frame for conducting this evaluation was extremely short and resources were limited. Nonetheless, we felt we were given full access to therapists and staff associated with the MST model. Data were made available, as we were able to discern what information existed and could be helpful. Consequently, while there are limitations and potential errors that arise from a quick time frame, every attempt has been made to emphasize findings and subsequent recommendations that appeared across a range of contexts and information sources. The goal here is to provide our perspective gleaned through interviews and data of MST in Hawaii to interested policy makers, administrators, service providers, clients, and community members.

RECOMMENDATION I: ACHIEVE CONSENSUS AND AGREEMENT REGARDING SERVICE DELIVERY GOALS AND THE ROLE OF MST IN REACHING GOALS

Throughout the interviews, we found that MST as a concept and service delivery method had taken on a life of its own far beyond the model itself. Respondents consistently perceived MST as being "oversold" as a potential cure for all youth and all problems in Hawaii. The backlash to MST has been considerable and has impacted on the experiences of families who receive MST, on the referral process, and on the impact of MST. The therapists interviewed understood the nature of MST and were enthusiastic and extensively trained and supervised. However, because of negative initial impressions and ongoing negative publicity, obtaining referrals remains a problem for some teams, some families have negative impressions of MST, and other agencies are more skeptical of MST than they might otherwise be. If MST is to survive and thrive in Hawaii, it needs to be consistently supported as a viable service option with its limitations fully noted. Home-Based MST will not provide solutions to all service system problems, its primary strengths lie in its demonstrated effectiveness with children and families who have specific types of problems. MST is best suited to addressing service system goals of effectiveness. Other system level interventions are needed to fully address issues such as cost and access to services.

RECOMMENDATION II: CONSISTENTLY DOCUMENT THE COSTS AND OUTCOMES OF MST HOME-BASED SERVICES

We were consistently frustrated in this process by the fragmentation and unavailability of fundamental information on the costs and outcomes of MST Home-Based services in Hawaii. We have extensive experience in working with cost and outcome data in other states and do not expect perfection from data sets that are complex and inherently difficult to establish. However, until we undertook this evaluation, none of the information across existing records had been coherently combined. An investment needs to be made in improving data collection and management strategies and protocols pertaining to MST. This would allow the use of such data to provide feedback and quality improvement mechanisms not only to administrators and policy makers, but also to the MST Home-Based teams themselves. This recommendation should be implemented with an eye to developing a logically constructed, well-integrated data management system that specifically addresses data quality issues cited in this evaluation.

RECOMMENDATION III: CONTINUE TO WORK TO TAILOR MST TO THE NEEDS OF HAWAII

MST Home-Based teams in Hawaii are already tailoring the MST model to work in the unique cultural climate of the state. In addition, therapists expressed a desire to have local consultation and expertise. It is not clear what fully needs to happen for MST to successfully be adapted to Hawaii. However, some tailoring of the model is inevitable and needs to be supported and conducted in ways that minimize deviations from the model.

RECOMMENDATION IV: DO NOT IGNORE SERVICE SYSTEM DEVELOPMENT

As we conducted our interviews, we found evidence of the types of inter-system and inter-agency challenges faced by all child service systems. Collaboration across service sectors such as mental health, juvenile justice, education, and social welfare has demonstrated positive system level outcomes. An ideal system would incorporate system level changes along with promising practices at the clinical level. We understand that Hawaii is making progress in the area of system reform. However, the attention focused on clinical level reforms, while merited, needs to be balanced with attention to systemic issues that may enhance or hinder the effectiveness of clinical reforms.

RECOMMENDATION V: LEARN FROM THE MISTAKES OF MST IMPLEMENTATION AND MOVE AHEAD

Clearly, MST was perceived as being oversold in Hawaii and implementing the MST-Based Continuum of Care concurrently with the MST Home-Based teams created considerable confusion. Also, solid cost and outcome information could have helped the decision making process. Other findings exist in this report regarding problems in implementation and adoption of the model. These lessons should help avoid similar problems with other service system and clinical reforms. It might, for example, have been useful to conduct MST initially as a pilot project so that the problems could be worked out and data collected before moving forward. Perhaps then, some data regarding the effectiveness of MST in Hawaii could have been collected. We understand both that hindsight is 20/20 and that Hawaii is under a unique set of pressures regarding the services delivered to children and adolescents. Still, there is much learned that can guide future efforts.

RECOMMENDATION VI: LEARN FROM THE POSITIVE ASPECTS OF MST IMPLEMENTATION AND MOVE AHEAD

We found a number of positive things regarding the MST Home-Based teams. We encountered enthusiastic, well-supervised and hard working clinical staff. We found considerable consistency in stated goals for service delivery and we found that clinical staff felt empowered by the tools provided by MST. We found that the costs of MST may be comparable to other mental health interventions provided in Hawaii on a per child basis, and we found some positive outcomes, however tentative they may be. The MST Home-Based teams demonstrate that clinical staff in Hawaii can indeed learn and embrace new treatment models and can creatively adapt them to Hawaii. Though there are serious challenges including a shortage of qualified therapists, there is clearly the capacity in Hawaii to implement intensive treatment models.

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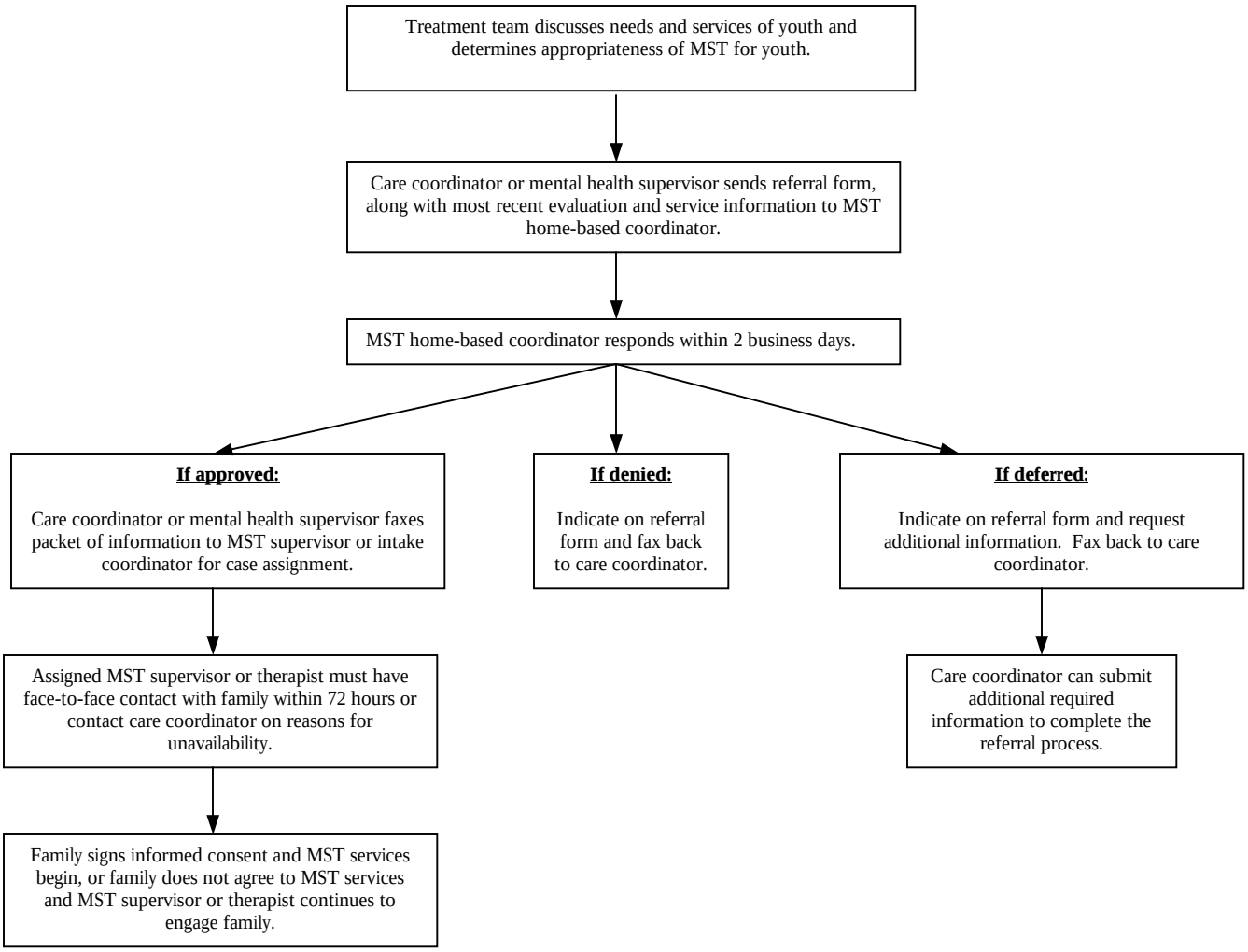
APPENDIX A

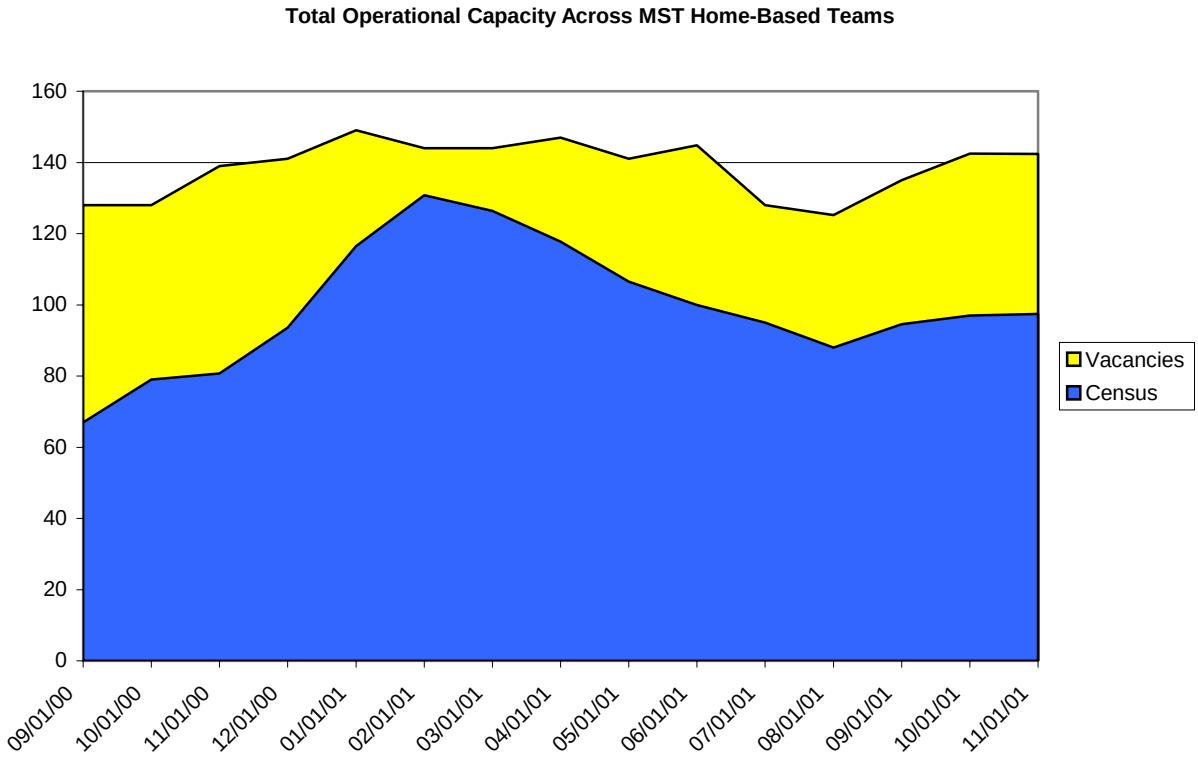
DIAGRAM OF REFERRAL PROCESS



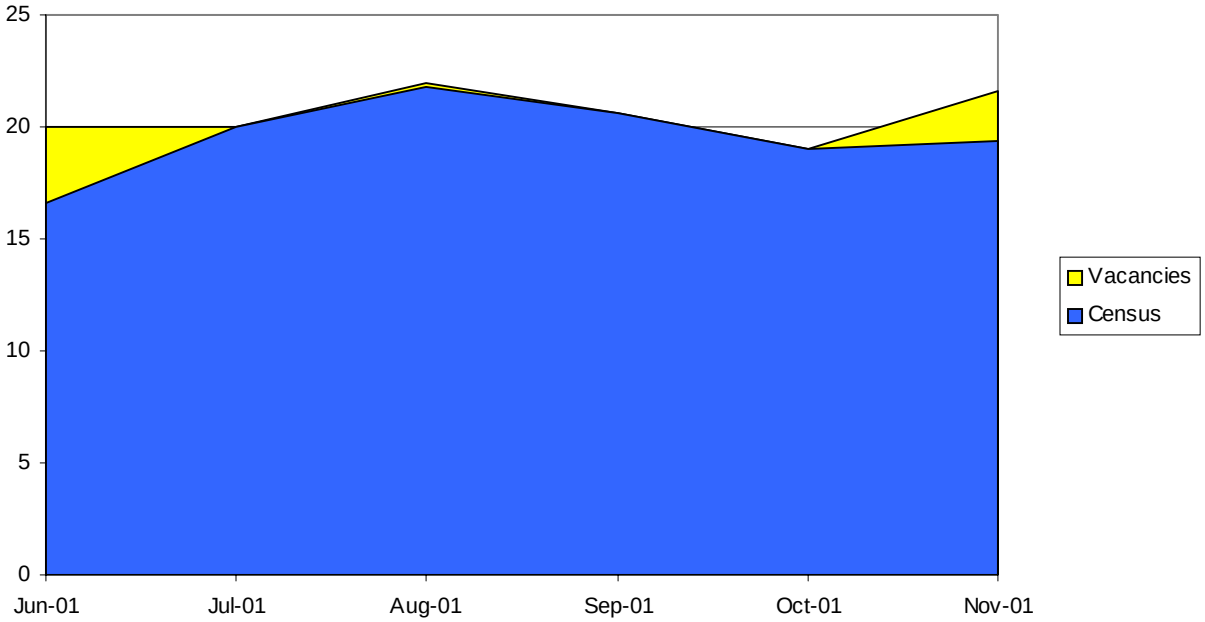
APPENDIX B

OPERATIONAL CAPACITY OF MST HOME-BASED TEAMS

The operational capacity across ten MST teams is charted for the past 15 months, from September 2000 to November 2001. However, due to the availability of data, the operational census of individual MST teams is charted from June to November 2001. Operational capacity is based on the number of therapists, with each therapist having a capacity of four youth.



East Hawaii Operational Capacity



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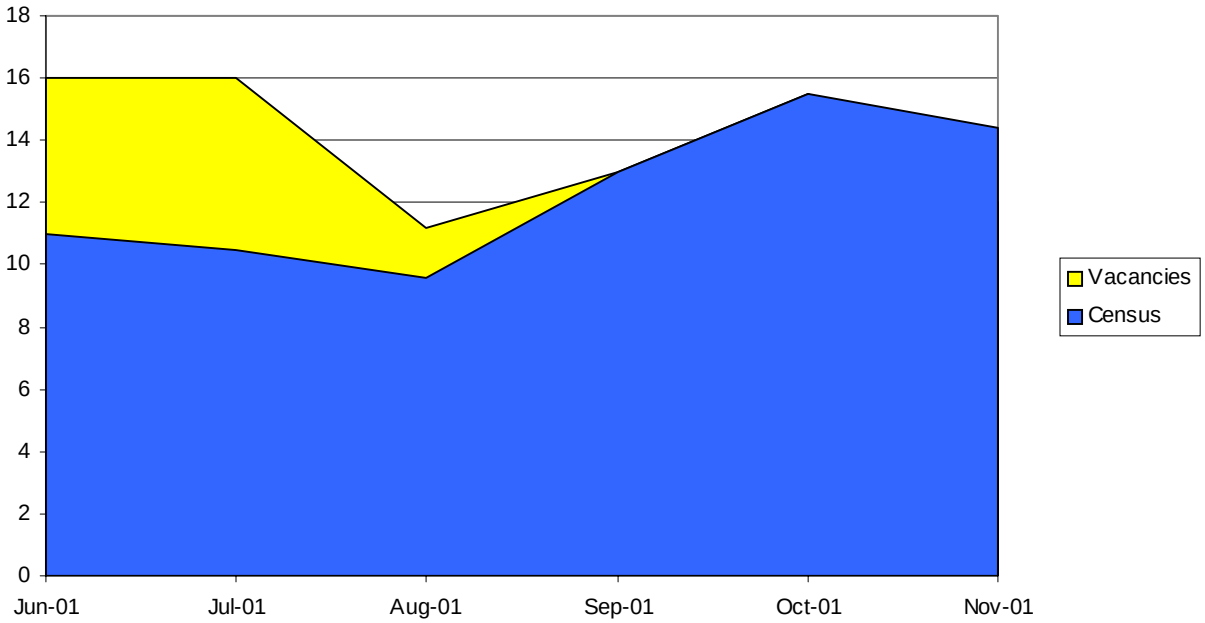
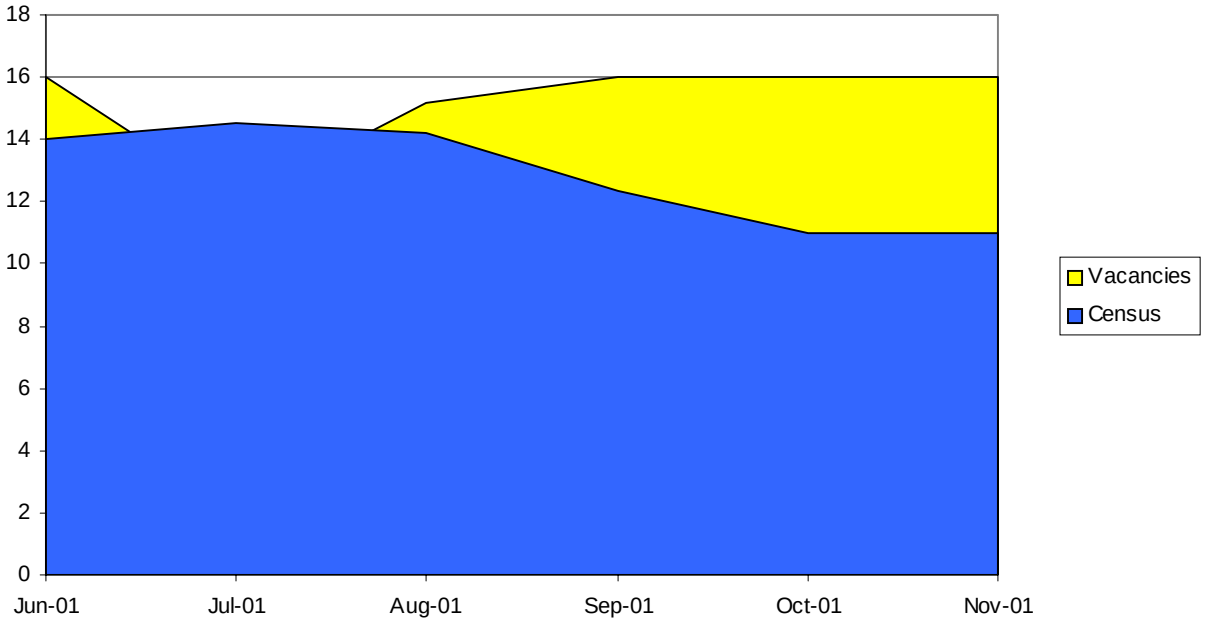
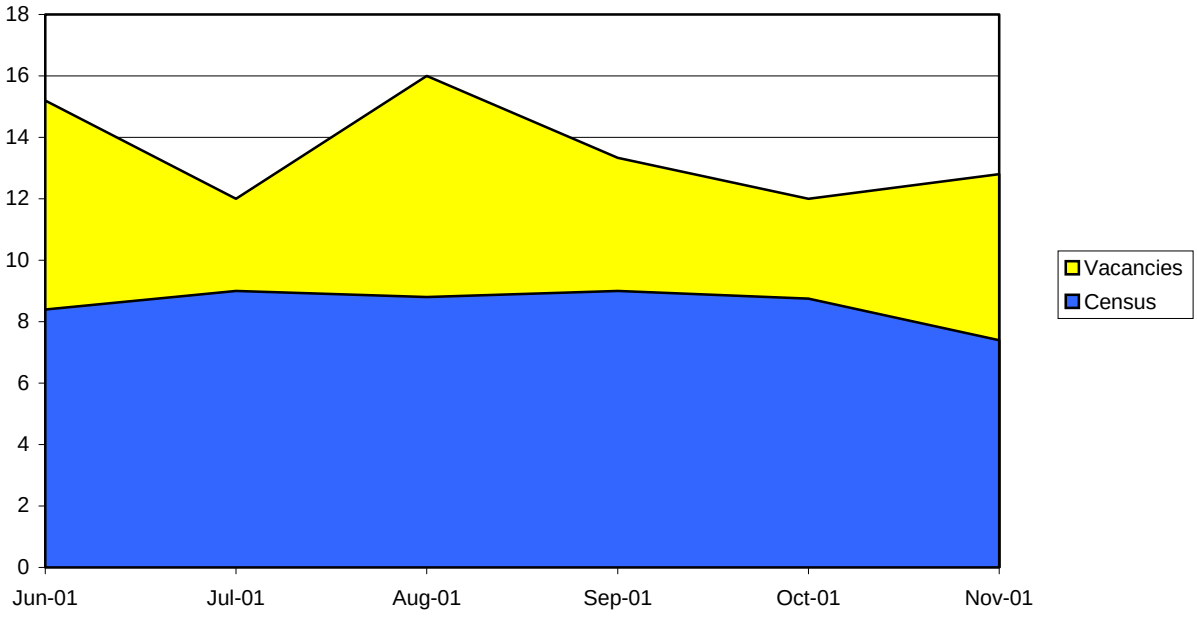


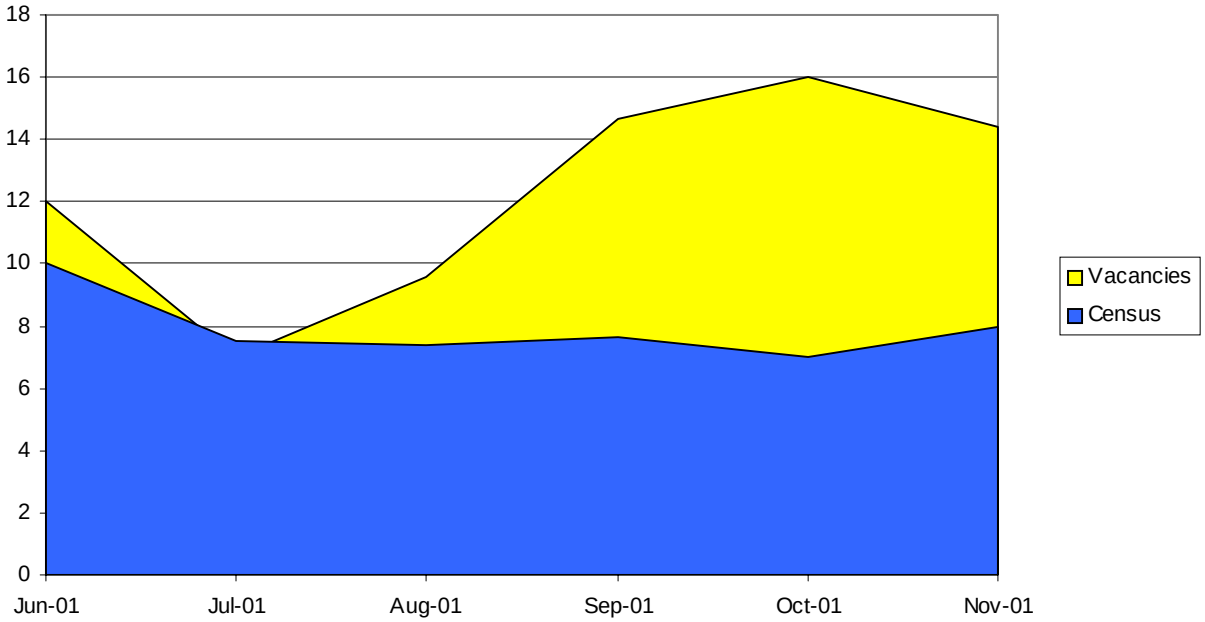
Leeward Operational Capacity



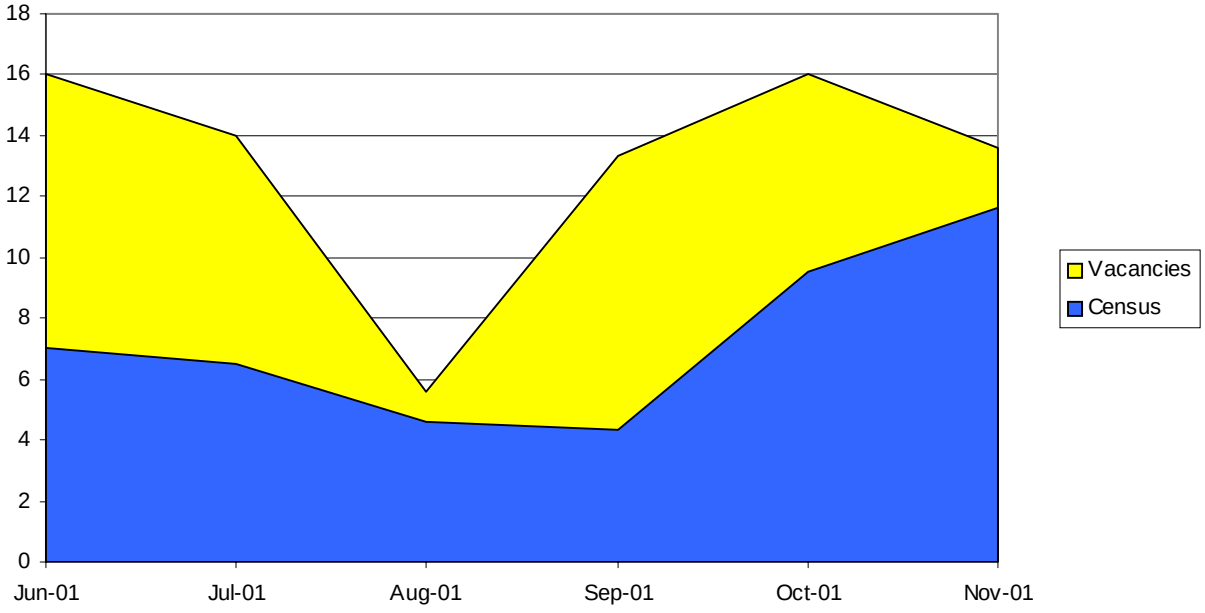
West Honolulu Operational Capacity



Central Oahu Operational Capacity



Windward Operational Capacity



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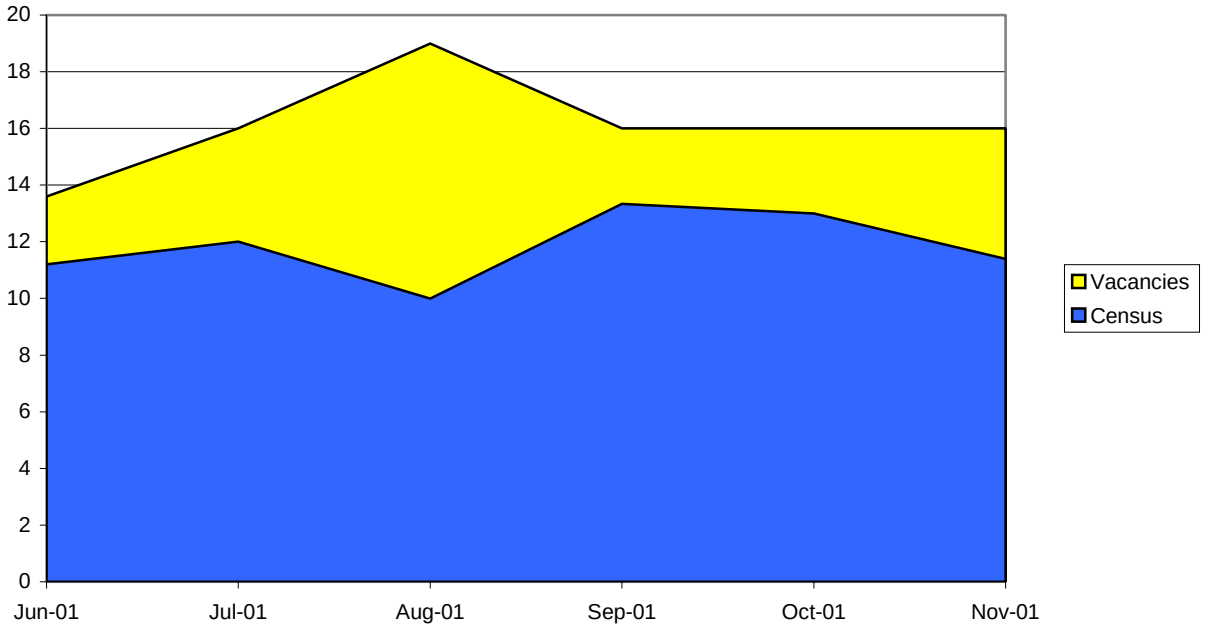
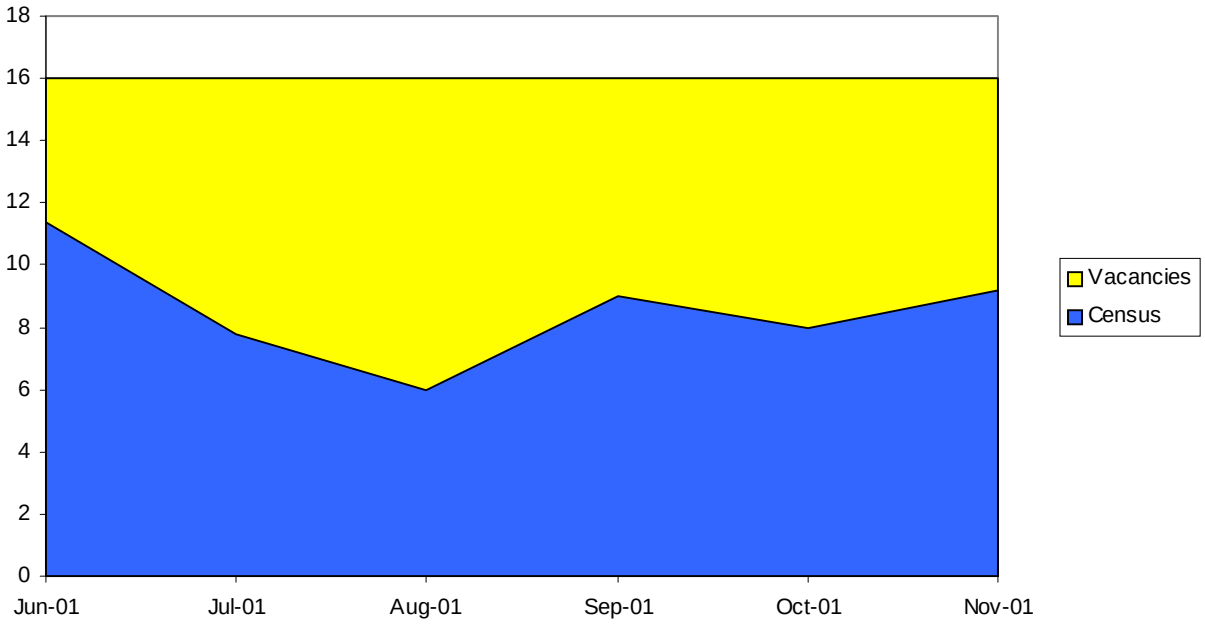


Central Maui Operational Capacity



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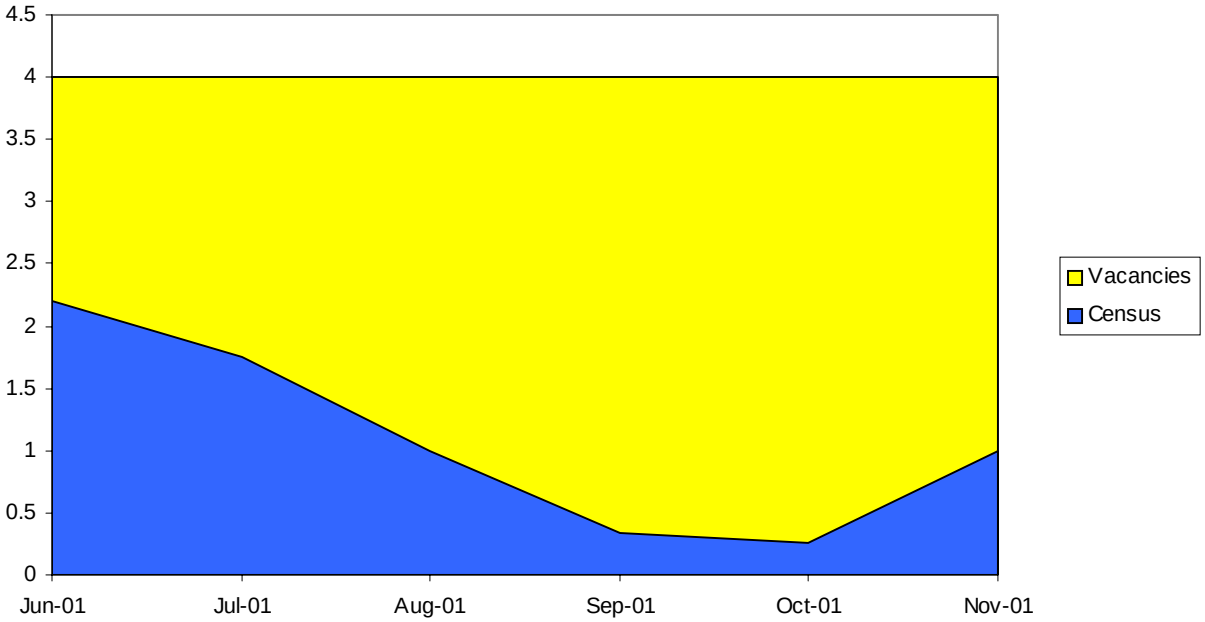

Lahaina/Molokai/Lanai Operational Capacity